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ABSTRACT

Some 1394 research studies from various African countries are annotated in this bibliography, which is divided into 37 country sections with a separate section (Africa General) for studies dealing with the continent as a whole, with geographical regions, or with groups of countries. The publications listed and summarized were published primarily during the 1960's, with a few of special interest which were published prior to 1960. For every section, each report or study is listed under one or more of the following 13 headings: national planning, regional studies, land tenure, cooperative forms of enterprise, capital and credit, livestock production, crop production, irrigation, marketing-consumption, processing industries, extension services and community development, rural-urban relations, and statistical services. Fishery and forestry studies are not included. Information is given on document availability, and a selection of published bibliographies is presented. Each entry is indexed by author and subject. (DK)

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ECONOMIC ASPECTS OF AGRICULTURAL DEVELOPMENT IN AFRICA

A selective annotated reading
list of reports and studies
concerning 40 African countries
during the period 1960 - 1969

compiled by

Edmund Neville-Rolfe

1969

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PREFACE

In one of the debates in the British Parliament which led up to the prohibition of the slave trade in 1806, the Prime Minister stated that Europe must make reparation to Africa for the harm done in the past, and predicted (with a most apposite Latin quotation from Virgil*) that, in a subsequent phase of world civilisation, Africa would play as great a part as Europe had in the past.

In spite of some political disturbances, the news from Africa is on the whole very good, of rapid development of health services, education, industry, and agriculture. Agriculture and rural problems in Africa have recently been the subject of considerable research work, much of which has been published in European languages other than English.

The Oxford University Agricultural Economics Research Institute is pleased to submit a summary of some 1,350 of such research reports, prepared by Mr. E. Neville-Rolfe.

While this is intended mainly for use in English-speaking countries, it may also prove valuable elsewhere.

It will be seen that the English-, French-, and Portuguese-speaking parts of Africa often have very different approaches to development problems, and comparisons between them should be fruitful.

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COLIN CLARK
Director

Agricultural Economics Rssearch
Institute,
Parks Road,
Oxford.

* nosque ubi primus equis oriens adflavit anhelis
illic sera rubens accendit lumina vesper.
(Georgics, I, 250-251)
And when sunrise salutes us with the breath of his panting horses,
Down there eve's crimson star is lighting his lamp at last.
(Translation by C. Day Lewis)

The lines were doubly apt in being spoken by William Pitt at the close of an all night sitting as the light of sunrise broke through the windows of the House of Commons on the morning of April 4th, 1792.

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List of Reports and Studies by Countries

Africa General	AFR	Malawi	MWI
Algeria	ALG	Mali	MAL
Botswana	BOT	Mauritania	MAU
Burundi	BUR	Morocco	MOR
Cameroons	CAM	Niger	NIG
Central African Republic	CEN	Nigeria	NGA
Chad	CHA	Portuguese Africa	POR
Congo (Brazzaville)	COB	Rhodesia	RHO
Congo (Kinshasa)	COK	Rwanda	RWA
Dahomey	DAH	Senegal	SEN
Ethiopia	ETH	Sierra Leone	SIE
Gabon	GAB	Somalia	SOM
Gambia	GAM	Sudan	SUD
Ghana	GHA	Swaziland	SWA
Guinea	GUI	Tanzania	TAN
Ivory Coast	IVO	Togo	TOG
Kenya	KEN	Tunisia	TUN
Lesotho	LES	Uganda	UGA
Madagascar	MAD	Zambia	ZAM

INTRODUCTORY NOTE

1. Limitations of space and time

This reading list contains 1,394 entries arranged in 37 country sections and in a separate section (Africa General) for studies which deal with the continent as a whole, with geographical regions, or with groups of countries. It is not an exhaustive bibliography. A considerable proportion of the studies listed will, however, be found to contain bibliographical information and a list of published bibliographies is given on page x. The reading list covers, broadly speaking, the current decade only. A few studies made before 1960 have been included which are considered of special interest or whose subject matter has not yet been superseded. On the other hand a certain number dating from the early 'sixties have been left out as being now mainly of historical interest. Coverage of 1969 is necessarily incomplete. Annual reports and other regular publications have been excluded. In the case of national or regional development plans only the most recently published in each country is listed.

2. Scope of the subject matter

The broad principle has been to select for listing and annotation studies whose subject matter is concerned, directly or indirectly, with factors determining the supply of, demand for, and trade in agricultural commodities. This principle has been interpreted fairly widely to cover macro- and micro-economic aspects of production, processing, distribution, and consumption. A number of regional studies has been included which deal with more than one of these aspects. The borderline between agricultural economics and rural sociology being more than usually blurred in Africa, community development, co-operation, and extension work are among the influences considered, but studies on agricultural education are not included. For every country section (and for the general section) each report or study is listed under one - occasionally more than one - of the following thirteen headings:

1. National planning. Situation and outlook
2. Regional studies
3. Land tenure
4. Co-operative forms of enterprise
5. Capital and credit
6. Livestock production
7. Crop production
8. Irrigation
9. Marketing/Consumption
10. Processing industries
11. Extension services and community development
12. Rural/urban relations
13. Statistical services

Fishery and forestry studies are not included.

3. Contents of entries

Except in a very small number of cases where, for one reason or another, a document had not, up to the time of going to press, become available for consultation, each entry is accompanied by a summary giving an indication of its principal contents. In the case of foreign language studies an English translation of the title is given. Publisher's name and (where known) place and date of publication are given, as well as the number of pages in the main part of the text. Printed texts are marked (P). All not so marked (other than extracts from periodicals) are assumed to be mimeographed in one form or another.

A few of the summaries have been derived (usually in an abridged form) from abstracts already published in the World Agricultural Economic and Rural Sociology Abstracts (WAERSA) (Commonwealth Agricultural Bureau, Oxford), in Tropical Abstracts (Royal Institute for the Tropics, Amsterdam), in the bibliography of the Centre International de Documentation Economique et Sociale Africaine (CIDESA) (Brussels), and in FAO Documentation (1967) (Documentation Center, Rome). These sources are acknowledged whenever they have been made use of. Absence of any reference to them is, of course, no indication that a particular study may not also have been summarised in one or more of these abstracts.

4. Access to documents

It should be emphasised that copies of the publications listed are not in every case readily obtainable. A few are out of print. A considerable number of the studies are the property of the governments by which they were commissioned. The consultants responsible for them are usually not able to provide copies, and often not access either, to persons who have not obtained prior consent from the client government. This is mostly the case with consultants in the United Kingdom, who should not be approached direct. In France, however, it is often possible to consult documents in the libraries of 'bureaux d'études' (such as BDPA and SEDES) which are financed by the state. But copies are generally only issued to readers for retention subject to client governments' agreement. Where relevant, the identity of the contracting client is indicated in the entry, immediately after the date of publication, e.g. '(Paris, BDPA, 1964/Republic of XYZ, Ministry of National Planning)'.

5. Reference system

The countries are arranged in alphabetical order, preceded by the Africa General section. Within each country section the entries are divided between some or all of the thirteen main headings listed in paragraph 2 above. Each entry has been given a 3-letter reference indicating country and a 3-or 4-digit reference indicating the number of the heading and the number of the entry under that heading, e.g. ALG 706 (Algeria, sixth item listed under Crop Production (heading No.7)). A few of the studies are listed under more than one heading (e.g. those which deal with both production and marketing of a commodity). The subject index has been kept as brief as possible. The reader should be able to locate most studies on a given topic by direct reference to the text (e.g. studies of beef production in the Cameroons would be found under CAM 6; those of food consumption in Nigeria under NGA 9). His attention is drawn to the explanatory note at the beginning of the index. The author index also lists the principal sponsoring institutions, e.g., FAO, IBRD, &c.

6. Acknowledgements

The assistance which I have received from a large number of organisations, public and private, and individuals, both in the United Kingdom and in continental Europe, in locating the documents for summarising is gratefully acknowledged.

E. NEVILLE-ROLFE

September, 1969.

LIST OF ABBREVIATIONS

The following abbreviations are used in the text.

AESED	Association Européens de Sociétés d'Etudes pour le Développement
AGRER	Société d'Etudes Agronomiques et de Réalisations
ATECO	Assistance Technique et Coopération
BCEOM	Bureau Central d'Etudes pour les Equipements d'Outre-Mer
BIT	Bureau International du Travail
BDPA	Bureau pour le Développement de la Production Agricole
BNEC	British National Export Council
CAITA	Compagnie Agricole et Industrielle de Tabacs Africains
CAR	Central African Republic
CASHA	Centre Africain des Sciences Humaines Appliquées
CCCE	Caisse Centrale de Coopération Economique.
CCTA	Commission for Technical Co-operation in Africa
CEEMAT	Centre d'Etudes et d'Expérimentation du Machinisme Agricole Tropical
CEFEB	Centre d'Etudes Financières et Bancaires
CERES	Centre d'Etudes et de Recherches Economiques et Sociales
CFDT	Compagnie Française pour le Développement des Fibres Textiles
CGEA	Compagnie Générale d'Economie Appliquée
CGOT	Compagnie Générale des Oléagineux Tropicaux
CIDESA	Centre International de Documentation Economique et Sociale Africaine
CIDR	Compagnie Internationale de Développement Rural
CINAM	Compagnie d'Etudes Industrielles et d'Aménagement du Territoire
CNCE	Centre National du Commerce Extérieur
CNRS	Centre National de la Recherche Scientifique
CODEA	Consortium pour le Développement Agricole
COGERAF	Compagnie Générale d'Etudes et de Recherches pour l'Afrique
CTFT	Centre Technique Forestier Tropical
DERROS	Projet pour le Développement Rural du Rif Occidental
ECA	Economic Commission for Africa
EIU	Economist Intelligence Unit
ELAKAT	Compagnie d'Elevage et d'Alimentation du Katanga
EPTA	Extended Program of Technical Assistance
FAO	Food and Agricultural Organisation (of the United Nations)
HMSO	Her Majesty's Stationery Office
IBRD	International Bank for Reconstruction and Development
IEC	Institut d'Etudes Centrafricaines
IEDES	Institut d'Etudes du Développement Economique et Social
IEMVT	Institut d'Elevage et de Médecine Vétérinaire des Pays Tropicaux

IFAC	Institut Français d'Action Coopérative
IFAC	Institut français de recherches Fruitières outre-mer
IFAN	Institut Fondamental d'Afrique Noire
IFCC	Institut Français du Café, Cacao, et autres plantes stimulantes
ILO	International Labour Office
INA	Institut National Agronomique
INADES	Institut Africain pour le Développement Economique et Social
INCIDI	Institut International des Civilisation Différentes
INEAC	Institut National pour l'Etude Agronomique du Congo
INSEE	Institut National de la Statistique et des Etudes Economiques
IRAM	Institut de Recherche et d'Application des Méthodes de développement
IRAT	Institut de Recherches Agronomiques Tropicales et des cultures vivrières
IRCT	Institut de Recherches du Coton et des Textiles exotiques
IRFED	Institut International de Recherche et de Formation en vue du Développement harmonisé
IRHO	Institut de Recherches pour les Huiles et les Oléagineux
ISEA	Institut de Science Economique Appliquée
ISEA/AN	Institut de Science Economique Appliquée/Afrique du Nord
NISER	Nigerian Institute for Social and Economic Research
ODI	Overseas Development Institute
OFEROM	Office central des Chemins de Fer d'Outre-Mer
ORSTOM	Office de la Recherche Scientifique et Technique d'Outre-Mer
PROHUZA	Centre d'etudes et d'information des Problème Humains dans les Zones Arides
PUF	Presses Universitaires de France
RCA	République Centrafricaine
SAIS	Studio Architetti Ingegneri Specializzati
SATEC	Société d'Assistance Technique et de Crédit social d'outre-mer
SATMACI	Société d'Assistance Technique et de Modernisation Agricole en Côte d'Ivoir
SCET (COOP)	Société Centrale pour l'Equipement du Territoire (Département Coopération)
SEAE	Secrétariat d'Etat aux Affaires Etrangères chargé de la coopération
SEDAGRI	Société d'Etudes et de Développement Agricoles
SEDES	Société d'Etudes pour le Développement Economique et Social
SEDIA	Société pour l'Etude et le Développement de l'Industrie en Algérie
SEDIAC	Société pour l'Etude et le Développement de l'Industrie, de l'Agriculture et du Commerce
SEITA	Société d'Exploitation Industrielle des Tabacs et des Allumettes
SEMA	Société d'Economie et de Mathématique Appliquées
SIDA	Swedish International Development Authority (Styrelsen för Internationell Utveckling)
SNCDR	Société Nationale Congolaise pour le Développement Rural

SOFRED	Société Française d'Etudes de Développement
SOGREAH	Société Grenobloise d'Etudes et d'Application Hydrauliques
SOGEP	Société Générale d'Etude et de Planification
SVMV	Société pour la Valorisation des Matières Végétales
TPI	Tropical Products Institute
UDEAC	Union Douanière et Economique de l'Afrique Centrale
UNDP TA	United Nations Development Project for Technical Assistance
UNESCO	United Nations Educational, Scientific and Cultural Organisation

ADDRESSES

The following is a list of some of the institutions in Western Europe whose research and documentation are of particular interest to agricultural economists

Belgium

Centre de Recherches des Pays en Développement
2b, rue Van Even, Louvain
CIDESA 7, place Royale, Brussels 1
INCIDI 11, bd. de Waterloo, Brussels 1
INEAC 1, rue Defacqz, Brussels 5

France

BDPA 202, rue de la Croix-Nivert, Paris 15e
CASHA 13 Aix-en-Provence
CCCE 233, bd. Saint-Germaine, Paris 6e
CEEMAT Parc de Tourvoie, 92 Antony
CFDT 9, rue Louis-David, Paris 12e
CINAM 4, rue Aboukir, Paris 2e
CNRS 15, quai Anatole-France, Paris 7e
COGERAF 1, ave. de Lowendal, Paris 7e
Collège Coopératif 7, ave. Franco-Russe, Paris 7e
IEDES 58, bd. Arago, Paris 13e
IRAM 97, rue Réaumur, Paris 2e
IRAT 45 bis, ave. de la Belle Gabrielle, 94 Nogent-sur-Marne
ISEA 11, bd. de Sebastopol, Paris 1er
ORSTOM 24, rue Bayard, Paris 8e
SATEC 110, rue de l'Université, Paris 7e
SEAE 20, rue Monsieur, Paris 7e
SEDES 67, rue de Lille, Paris 7e

German Federal Republic

Deutsche Institut für Afrika-Forschung
2 Hamburg 36, Postrstr. 31
Deutsche Stiftung für Entwicklunsländer
53 Bonn, Blüchestr. 16
Ifo-Institut für Wirtschaftsforschung, Afrika Studienstelle
8 Munich 27, Pienzenauer Str. 44
Institut für Ausländische Landwirtschaft der Technischen Universität Berlin
1 Berlin 33 (Dahlem), Pobieskiallee 64-66
Institut für Ausländische Landwirtschaft der Universität Göttingen
34 Göttingen, von Siebold Str. 4-6
Institut für Ausländische Landwirtschaft der Hochschule Hohenheim
70 Stuttgart-Hohenheim
Tropeninstitut der Justus-Liebig-Universität Giessen
63 Giessen, Landgraf-Phillipp-Platz 2

Italy

Istituto Agronomico per l'Oltremare
via Cocchi 4, Florence
Istituto Italiano per l'Africa via Aldovrandi 16, Rome

Netherlands

Koninklijke Instituut van de Tropen
Mauritskade 63, Amsterdam
Landbouwhogeschool, Afd. Tropische Landhuiskunde
Diedenweg 18, Wageningen

Portugal

Centro de Documentação Cientifica Ultramarina, Ministério do Ultramar
Av. da Ilha da Madeira, Lisbon 3
Comissão para o Estudo do Produtividade em Africa
Rua da junqueria 86, Lisbon 3
Comissão para os Inquéritos Agrícolas no Ultramar, Ministério do Ultramar
Av. de Ilha da Madeira, Lisbon 3
Instituto Superior de Ciencias Sociais e Política Ultramarina
Rua da Junqueria 86, Lisbon 3
Junta de Investigações do Ultramar
Ibid.
Sector de Estudos Económicos do Ultramar Português
Ibid.
Overseas Companies of Portugal
Rua Victor Cordon 36, Lisbon 3

Switzerland

Institut Panafricain pour le Développement
65, rue de Lausanne, Geneva

United Kingdom

Centre for African Studies, University of Cambridge
Sidgwick Ave., Cambridge
Centre for African Studies, University of Edinburgh
Edinburgh 8
Centre for West African Studies, University of Birmingham
Birmingham 15
Co-operative College
Stanford Hall, Loughborough, Leics.
Department of Agricultural Economics, University of Reading
Building No.4, Earley Gate, Whiteknights Road, Reading
Foreign and Commonwealth Office Library
Sanctuary Buildings, Great Smith St., Westminster, London, S.W.1.
Institute of Commonwealth Studies, University of London
27, Russell Sq., London, W.C.1.
Institute of Commonwealth Studies, University of Oxford
21, St.Giles, Oxford
Institute of Development Studies, University of Sussex
Falmer, Brighton
Overseas Development Ministry Library
Eland House, 29, Bressenden Place, London, S.W.1.
Overseas Development Institute
160, Piccadilly, London, W.1.
Plunkett Foundation for Co-operative Studies
10, Doughty St., London, W.C.1.
Rhodes House Library, University of Oxford
South Parks Road, Oxford
Tropical Products Institute Library
56-62, Gray's Inn Rd., London, W.C.2.

A SELECTION OF PUBLISHED BIBLIOGRAPHIES

General

OVERSEAS RESEARCH DEVELOPMENT Research Paper No.9, 11 pp.

BRENDL O Ausgewähltes Schrifttum über Agrarwirtschaft und verwandte Gebiete in Schwarzafrika. (Selected writings on agricultural economics and associated subjects in black Africa.) ("Das Schrifttum der Agrarwirtschaft", Vienna, 1968, No.1, pp 1-11 and No.2, pp 25-39.)

CAISSE CENTRALE DE COOPERATION ECONOMIQUE Crédit agricole dans les pays en voie de développement. Fiche bibliographique. (Agricultural credit in developing countries: a bibliographical list.) (Paris, 1968) 9 pp.

CCTA (Commission for Technical Co-operation in Africa South of the Sahara.) An inventory of economic studies concerning Africa south of the Sahara. ed. Peter ADY, 1960, 301 pp (P) and Supplement No.1, 1962, 59 pp (P). Titles in French and English and Portuguese and Spanish (with French and English translations). Summaries in English for anglophone countries, in French for other countries.

DEUTSCHE STIFTUNG FUR ENTWICKLUNGSLÄNDER Entwicklungsländer-Studien, Bibliographie der Entwicklungsländer-Forschung, 1958-1964. (Bibliography of Research in developing countries, 1958-1964.) (Bonn, 1966) 4 vols. Includes agricultural economic research studies in developing countries of Africa.

DUBLY A Bibliographie pour une initiation aux méthodes concernant le développement rural. (Introductory bibliography of the methodology of rural development.) (Paris, ATECO, 1968) 53 pp (P).

UNIVERSITY OF EDINBURGH, DEPARTMENT OF SOCIAL ANTHROPOLOGY African urbanisation. A reading list of selected books, articles, and reports. (London, International African Institute, 1965) 27 pp (P).

FREITAG Ruth Agricultural development schemes in sub-Saharan Africa, a bibliography. (Washington, DC., Library of Congress, 1963) 189 pp (P).

GITTINGER J P The literature of agricultural planning. (Washington, DC., National Planning Association, Center for Development Planning, 1966) 132 pp. About 5 per cent of entries concern Africa.

LEFEVRE M P C Les paysannats en Afrique au Sud du Sahara. ('Paysannats' in Africa south of the Sahara.) (Brussels, CEDESA, 1965) 215 pp (P). Technical, economic, sociological, and geographical aspects of agriculture to 1961.

OECD Food and agriculture in developing countries, a special annotated bibliography. (Paris, OECD Development Centre, 1967) Vols. I & II, 12 pp, and 13 pp.

UN/ECA Bibliography of economic and social development plans of African countries. (Addis Ababa, 1968) 39 pp.

UN/ECA Bibliography of African statistical publications, 1950-1965. (Addis Ababa, 1966) 256 pp.

Individual countries or regions

EAST AFRICAN STAFF COLLEGE Some current research in East Africa (Nairobi) No.1 (1964), No.11 (1965), No.III (1966), 23 pp.

FOSTER P W Research on agricultural development in North Africa. (New York, The Agricultural Development Council, 1967) 72 pp (P). Detailed, with introduction and informed commentary.

KOTEI S I A A selected annotated bibliography of Ghana. (Accra, Ghana Library Board, Padmore Research Library on African Affairs, 1965). Special Subject Bibliography No.5, 47 pp.

McLOUGHLIN P Research on agricultural development in East Africa. (New York, The Agricultural Development Council, 1967) 112 pp (P). Detailed, with introduction and informed commentary.

OECD A bibliography of Guinea. (Paris, OECD Development Centre, 1965) 46 pp. Agriculture and fisheries (pp 36-39), mainly to 1960.

PERROT C & SAUVALIE Hélène Répertoire bibliographique du Congo (Brazzaville). (Paris, BDPA, 1965) 112 pp. Agriculture (pp 78-88, entries 640-741), mainly to 1960.

SYRACUSE UNIVERSITY Malawi - a draft bibliography. (Syracuse, N.Y., undated, ? 1964) 59 pp.

VISSER Johanna List of books, articles, and government publications on the economy of Nigeria in 1963 and 1964. (Ibadan, Niser, 1967) 61 pp.

1. PLANNING AND DEVELOPMENT STUDIES

GAUD M
AFR 101
Les premières expériences de planification en Afrique Noire. (First experiences of planning in black Africa.) (Paris, Cujas, 1968) 483 pp (P).

A comparative study of the following plans in French- and English-speaking countries:
Cameroons (1961-65), Congo (Brazzaville) (1964-68), Dahomey (1962-65), (1966-70), Ethiopia (1963-67), Ghana (1963/64-1969/70), Guinea (1961-63), Kenya (1964-70), Madagascar (1964-68), Mali (1961-65), Mauritania (1963-66), Niger (1965-68), Nigeria (1962-68), Senegal (1961-64 and 1965/66-1968/69), Sierra Leone (1962/63-1972), Somalia (1963-67), Sudan (1961/62-1970/71), Tanzania (1964-68), and Togo (1966-70). Part I compares the organisation and administration of planning in the countries. Part II considers techniques of drawing up plans, the selection of targets and projects, and of general and sectoral growth rates, and regionalisation. Part III deals in turn with each major planning sector (education, employment, infrastructure, etc.). The main criteria adopted for planning the development of the primary sector are discussed on pp 196-201. It is noted that plans in non-francophone countries tended, with the exception of Tanzania and Ghana, to treat agriculture in little depth, or virtually ignore it. Generally speaking higher incomes in the primary sector are seen as a potential means of consuming industrial products rather than as a source of savings for the development of industries processing agricultural produce. A tendency to concentrate on developing production for export is also observed, without always sufficient attention being paid to the elasticity of the markets. Two examples of planning projects are critically examined, the Malagasy agricultural development companies ('sociétés d'aménagement agricoles') and a study of the economics of rural slaughterhouses in Kenya. The author observes that, contrary to common sense, economic aspects of projects often receive a somewhat cursory examination, whereas the technical ones are examined in considerable depth. Part III contains a comparative study of the growth rate planned for GDP and for individual sectors (primary sector pp 325-328). In conclusion, the main virtues of the planning process in French-speaking and English-speaking countries are assessed. These are found to be largely complementary, so that each group could draw valuable lessons from confrontation and contact. The 'non-Francophones' are found to have acquired a real lead on the organisational level. The 'Francophones' show far more awareness of the problems of rural development, and of the new social structures required to solve them, particularly at regional and local level.

VARIOUS
AFR 102
Problems and approaches in planning agricultural development. Proceedings of the joint German Foundation/ECA/FAO Seminar, held at Addis Ababa, 16th October-7th November, 1967. (Bonn, German Foundation for Developing Countries, 1968) 383 pp (P).

The papers are divided under: aims of agricultural development planning; pre-conditions for it; methods and instruments; and aspects. These include land tenure, marketing, extension, settlement schemes in irrigated areas, credit and co-operatives, financing, social services, and large-scale arable and plantation enterprises. There are studies of individual projects in Ghana, Kenya, Sierra Leone, Sudan and Tanzania. Two further sections deal with how to plan an agricultural project and inter-regional planning.

ARNOULD J P
AFR 103
Développement de l'agriculture dans les pays où l'IRAT exercise son activité. Incitations au développement. Situation actuelle et objectifs de production. (Agricultural development in countries where IRAT operates. Incentives to development. Present situation and production targets.) (Paris, 1966, IRAT) 69 pp (P).

Country by country summaries of planned targets for agricultural production and for output of food industries.

GÜSTEN R & HELMSCHROTT H Volkswirtschaftliche Gesamtrechnung in
AFR 104 Tropisch-Afrika. (National accounting in tropical Africa.) (Munich, Ifo-Institut für Wirtschaftsforschung, 1965) 69 pp (P).

One section deals with former French areas of Africa and another with East Africa and exemplified by Uganda. (WAERSA 1460/1966.)

DUMONT R
AFR 105 Développement agricole africain. Essai sur les lignes principales du développement africain et les obstacles qui le freinent. (Agricultural development in Africa. Guidelines for African development and its obstacles.) (Paris, PUF, 1965) 223 pp (P).

Part 1 outlines the main general problems, and also examines specific problems in planning, area specialisation, tenure, continuous cropping, fertilisers, research, extension, credit, cooperatives and marketing. Part 2 deals with livestock farming and its integration with crop farming. Part 3 examines problems of special areas, including that north of the Sahara, the dry areas south of it, the rain-forest areas, and East Africa. (WAERSA 121/1966.)

DUMONT R
AFR 107 L'Afrique noire est mal partie. (False start in Black Africa.) (Paris Editions du seuil, 1962) 287 pp (P).
AFR 107A False start in Africa (London, Deutsch, 1966). 320 pp (P) English translation by NAUTS OTT Phyllis. Additional chapter by HATCH J.

A critical examination of the problems of agricultural development in Africa south of the Sahara, based on numerous personal studies in French-speaking countries. (WAERSA 226/1963.)

HESELTINE N Obstacles to agricultural development in underdeveloped
AFR 108 countries in Africa. (Rehovot, Centre for Comparative Studies in rural development, 1964) 28 pp.

Traditional technology, the system of land tenure, and the marketing structure are the three factors forming the main economic obstacles to increased agricultural production in Africa. (WAERSA 122/1966.)

MOUSSA P
AFR 109 The economics of African development. (London, Pall Mall Press, 1967) 294 pp.

A major chapter is devoted to agricultural production and marketing, and the effectiveness of various programmes introduced to increase output is evaluated. (WAERSA 3539/1967.)

VARIOUS
AFR 110 African agricultural development. Reflections on the major lines of advance and the barriers to progress. (New York, United Nations, 1961/Addis Ababa, ECA) 243 pp.

A general survey of the obstacles to development is followed by their examination under a number of particular headings: organisation and land tenure; research and mechanisation; training and education; credit and co-operation. The different problems of North Africa and East Africa and the difficulties of modernising and diversifying agriculture in the western Sahelo-Sudanian savannahs are considered separately. There are also sections dealing with forestry and fishing, and with the supply and processing industries. It is tentatively concluded that some progress has been made, but that acute economic and psychological problems remain for African countries to solve.

McFARQUHAR A M M Problems of agrarian development (from "African
AFR 111 Development Planning", Impressions and Papers of the Cambridge Conference on Development Planning, September 22nd-October 5th, 1963, ed. ROBINSON R., 148 pp (P), pp 73-86).

Some critical constraints in agricultural development are examined. The author deplores a lack of economic research and analysis, as well as the absence of a practical approach to agricultural education and to the training of graduates and others for extension work in the field. Priority should be given to increasing output of export crops and of food crops for domestic consumption. The importance is stressed of making use of low-cost local resources and avoiding capital intensive investments.

MAKINGS S M Agricultural problems of developing countries in Africa.
AFR 112 (Lusaka, Oxford University Press, 1967) 184 PP (P).

Factors contributing to success or failure of development policies and schemes are analysed under seven headings: structural change, land tenure, planning, extension methods, credit, marketing, and price stabilisation. The final chapter lists specific conclusions and outlines the evolutionary pattern of progress of the family farm. Two principal objectives are seen in African government programmes: expansion of the agricultural contribution to the national economy, and widespread improvement of rural welfare. (WAERSA 3249/1968.)

ANCIAN G *et al* Le développement rural dans les pays d'Afrique noire
AFR 113 d'expression française. (Rural development in the countries of French-speaking black Africa.) (Paris, SEDES, 1965/ Direction Générale à la Recherche Scientifique et Technique) 4 vols.

Vol.I (196 pp): a general study of development problems (methods adopted, obstacles encountered, and results achieved) in sixteen French-speaking African countries since 1947. The other volumes examine a number of development plans and individual projects in depth: Vol.II (77 pp) in Madagascar (see MAD 1113); Vol.III (135 pp) in Senegal (see SEN 702), Cameroons (see CAM 1101), and Chad (see CHA 1104); Vol.IV in Upper Volta (see UPV 103) and Senegal (see SEN 108).

CHODAK S Some aspects of the theory of modernisation as applied to
AFR 114 sub-Saharan Africa: a case study. ("Africana Bulletin", Warsaw, No.7, pp 69-89.)

MALDANT Y *et al* Facteurs naturels, densité de population, et production
AFR 115 agricole. Les phénomènes d'économie d'échelle dans les 28 pays de la zone franc. Essai d'analyse statistique par coupe intemporelle. (Natural phenomena, population density, and agricultural production. Some aspects of economies of scale in the 28 countries of the franc area. An attempt at cross-section analysis.) ("Revue Tiers-monde", IEDES, Paris, PUF, No.34, 1968, pp 363-461.)

17 African countries and Madagascar are involved in this attempt to establish a production function for agriculture in developing countries. The study falls into two main parts: a consideration of the influence of population and capital on production, and the part played by natural phenomena, with special reference to 1949 and 1960.

FAO/ECA Report of a meeting on government measures to promote the
AFR 116 transition from subsistence to market agriculture in Africa, held at Addis Ababa, 27th April-7th May, 1964. 49 pp.

Part I describes the current situation, in which efforts are either being concentrated on particular individuals or areas or government measures are being applied on a broad front. The importance of the growth of market demand is stressed. Part II considers measures aimed at the individual producer; Part III, those designed to promote large-scale shifts in production. Part IV discusses priorities for follow-up action by African governments, and makes recommendations for action by aid-giving governments and agencies, and refers briefly to that to be taken by FAO/ECA.

DEMBELE M
AFR 117
Marche a suivre pour l'intégration de l'agriculture de subsistence dans le développement. Pour un processus de croissance dans le cadre de planification. (How to secure the integration of subsistence agriculture in development, and fit the process of growth into the framework of planning.) ("Développement et Civilisation", Paris, 1966, No.28, pp 73-83.)

The factors contributing to the unsatisfactory state of subsistence agriculture in Africa are examined and recommendations made for its improvement. (Tropical Abstracts q600/1967.)

CLARK C & HASWELL Margaret The economics of subsistence agriculture
AFR 118 (London, Macmillan, 1967). (3rd edition) 245 pp (P).

The authors' data is drawn from all parts of the underdeveloped world as well as from earlier centuries of countries with developed economies and from ancient civilisations. Africa is distinguished by the relatively low man/land ratios in most parts of the continent. Ukara island in Lake Victoria (see TAN 204) is cited as one of the evident exceptions in Black Africa, where there is on the whole little population pressure at present, and land is abundant. Significantly, African countries do not figure prominently in the chapter on rents and prices of agricultural land. Data from FAO and other sources are used to place a number of developing African countries, or groups of countries, in their relative stage of emergence from subsistence agriculture, measured in terms of kgs. of grain equivalent of product per person per year. Micro-economic studies from Northern Nigeria, Cameroons, Uganda, Nyasaland and Gambia are also quoted to illustrate comparative stages in the development of production and of productivities in agriculture (in terms of both average and marginal returns). African examples occur in the chapters on demand elasticities for food and on transport costs. The importance of these to agricultural development is stressed. A concluding chapter discusses ways of using development aid to stimulate exports of primary products from developing countries.

CLAYTON E
AFR 119
Planning the development of peasant agriculture. (In "African Primary Products and International Trade", Edinburgh University Press, 1965, pp 148-158. (P).)

The main aim of this paper is to examine the problems of transforming labour time into agricultural output. (WAERSA 1156/1966.)

JONES W O
AFR 120
Increasing agricultural productivity in tropical Africa. (From "Economic Development in Africa", papers presented to the Nyasaland Economic Symposium, Blantyre, July 1962, edited by JACKSON E F, Oxford, Blackwell, 1965, pp 19-50 (P).)

General conditions for economic progress in tropical agriculture are examined, recommendations made on marketing, education, land, and capital.

ALLAN W
AFR 121
The African husbandman. (Edinburgh, Oliver & Boyd, 1965) 503 pp (P).

A mainly descriptive study. The final chapter deals with economic transition and the role of agriculture. (WAERSA 120/1966.)

LITTLE I M D Aid to Africa: an appraisal of U.K. aid to Africa south
AFR 122 of the Sahara. (Oxford, Pergamon Press, 1964) 76 pp (P).

The author concludes that the emphasis of aid to Africa needs to shift to agriculture and rural development. (WAERSA 1326/1965.)

VON BLANCKENBURG P & BONTE-FRIEDHEIM C Agrahilfe für Afrika. Die
AFR 123 allegemeinen Aufgaben der Landwirtschaftsforderung und die Technische Hilfe der Bundesrepublik - eine kritische Stellungsnahme. (Aid for African agriculture. The role of

agricultural promotion and the technical aid of the Federal Republic of Germany: a critical review.) ("Zeitschrift der ausländische Landwirtschaft", Frankfurt/Main, 1965, No.3, pp 181-192.)

A summary of the methods and aims of agricultural policy in developing African countries. (WAERSA 2278/1965.)

LECOMTE B
AFR 124

Eléments pour une recherche sur l'organisation de l'aide (interne et externe) au développement rural en Afrique noire d'expression française. (Some data for research into organisation of aid (domestic and foreign) to rural development in French-speaking black Africa.) (Paris, Centre de Coopération, 1968) 44 pp.

A discussion of possible measures by donor countries and recipient governments for ensuring a more effective administration of agricultural aid programmes, and a more fruitful partnership between both parties at all levels.

GROVE A T
AFR 125

Africa South of the Sahara.(London, Oxford University Press, 1967) 275 pp (P).

A descriptive and illustrated geography.

VANZETTI C
AFR 126

Land and man in Africa. ("Societá Rurale", Bologna, No.2, 1964, pp 3-55.)

A summary, illustrated with maps, of the geography, demography, land utilisation, livestock resources and tenurial systems of the continent.

2. REGIONAL STUDIES

TIANO A
AFR 201

Le Maghreb entre les mythes. L'économie nord-africaine depuis l'indépendance. (The Maghreb seen through the myths. The economy of North Africa since independence.) (Paris, PUF, 1967) 623 pp (P).

A dispassionate description, from a liberal/socialist standpoint, of the realities and myths (whether of traditional or progressive origin) of the economic situation in the three Maghreb countries. Part I gives the social and economic background. Part II deals with agriculture and agricultural development policies (pp 125-240). There are separate sections on structure, production and marketing, technical aspects, credit, agrarian reform, and the relations between administration and peasant. Part III deals with industry and industrialisation policies, and Part IV with external trade and monetary and financial problems. Part II is given an extensive bibliography.

PLUM W
AFR 202

Sozial Wandel im Maghreb; Voraussetzungen und Erfahrungen der genossenschaftlichen Entwicklung. (Social change in the Maghreb; conditions for the development of co-operatives, and experience to date.) (Hanover, Verlag für Literatur Zeitgeschehen, 1967) 420 pp (P).

An outline of rural policy during the colonial period is followed by a description of recent developments in each of the three countries. Particular stress is laid on the social and psychological background to the different forms of co-operative action taken. (WAERSA 1894/1968.)

BERQUE J *et al*
AFR 203

Le fellah maghrebin et le développement. (The Maghreb peasant and development.) ("Confluent", Paris, 1964, Nos. 45/46, pp 827-1040.)

A symposium on the problems of smallholders in the Maghreb. In Algeria in 1960, of 530,000 landowners, three-quarters owned on average 4.2 ha. each. In Morocco, 90 per cent of rural families owned less than 2 ha. in 1959. In Tunisia, the average size of holding varied between 6 ha. in the north and 20 ha. in the centre. A large proportion of the rural population owns no land, and may have as little as 100 days of work a year. 'Promotion nationale' in Morocco, land reform in Algeria, and the co-operative production units in Tunisia are described.

HELLEINER G K (editor) Agricultural planning in East Africa. Proceedings of a conference held at the University College, Dar-es-Salaam, April, 1967. (Nairobi, East African Publishing House, 1968) 183 pp (P).
AFR 204

Planning for agriculture (BRYCESON D N M) in Tanzania JOHANSON K), Kenya (GRAY C S), and Uganda(MAYAKAANA L M A & STANTON D); extension, education and research (BELSHAW D G R); mechanisation (HALL M); agricultural credit in Tanzania (COLLINSON M); and East African coffee policies (CLARK R).

NDEGWA P The common market and development in East Africa. (Nairobi, East African Institute of Social Research, 1965) 150 pp (P).
AFR 205

After an examination of inter-country and external trade, the nature and benefits of the common market are considered. Recommendations for the future include closer economic integration, expanded trade with the Community's neighbours, and domestic substitution of imports from more distant trading partners.

ANON Zambia and the East African Common Market. (London, The Economist Intelligence Unit, 1968/The Republic of Zambia) 2 vols. 316 pp and 246 pp.
AFR 206

The study was designed to assist in the formulation of the Zambian Plan. It examines the economic differences between Zambia and the countries of the EACM against the background of future trade and greater economic interdependence and in the light of two alternative assumptions: that Zambia accedes to the EACM or that it does not. Vol.I contains a general examination of comparative economic data for Zambia and Kenya, Tanzania, and Uganda, including the structure of agriculture. Vol.II completes section I by considering these data in greater detail (agricultural structure pp 35-52) and by forecasting the development of each of the four countries between 1966 and 1975. A second section examines the scope for integration between Zambia and the EACM.

BELSHAW D G R Agricultural production and trade in the East African Common Market. (In "Federation in East Africa, opportunities and problems", Nairobi/London, Oxford University Press, pp 83-101 (P).)
AFR 207

A paper dealing with problems in a number of key areas of agricultural policy affecting total gains to be obtained from the East African Common Market. (WAERSA 1255/1967.)

CHERNIAVSKY M Development prospects in East Africa: Kenya, Tanzania, and Uganda. (Bergen, Christian Michelson Inst., 1965) 112 pp.
AFR 208

Projections for GDP, including agricultural production, both for domestic and export consumption and public and private consumption, are given for the end-year of each quinquennium to 1985. Urban food consumption (with estimates of expenditure elasticities and of expenditure per head for a range of commodities) is distinguished from rural food consumption (with estimates of expenditure elasticities, and of subsistence production and of monetized purchases separately).

CLARK P G The rationale and uses of a projection model for the East
AFR 209 African economies. ("East African Review", 1965, No.2, pp 1-20.)

Description of a model to be used in making intermediate projections for development planning which can be calculated with available statistical data. (WAERSA 1985/1966.)

SCHULTZE J H Evolution und Revolution in der Landwirtschaftsentwicklung
AFR 210 Ostafrikas. (Evolution and revolution in the agricultural development of East Africa.) (Wiesbaden, Steiner Verlag, 1966.)

A study of the factors, geographical, demographic and social, influencing the development of East Africa. This has been by no means uniform. The differentiation, which has tended to increase between one area and another, is explained and illustrated.

JOHNSTON B F The choice of measures for increasing agricultural pro-
AFR 211 ductivity: a survey of possibilities in East Africa. ("Tropical Agriculture", Journal of the Imperial College of Tropical Agriculture, West Indies, 1964, No.2, pp 91-113.)

Part I examines general principles for allocating resources to agricultural development. Use of scarce resources, particularly those of high opportunity cost, should be minimised. 'Complementary inputs', such as research and extension programmes, should be selected to make the most of the limited men and money available. Given the shortage of statistical data, priorities will largely have to be decided on the basis of personal experiences. Part II draws on some of them to examine what are the 'proximate factors' (those depending on farmers' own decisions) and 'conditioning factors' determining productivity increases. The latter include research, and spreading its results; better supply of inputs and marketing of outputs; financial aids and incentives; and methods of influencing human attitudes.

FAO West African pilot study of agricultural development 1960-
AFR 212 1975, prepared for the West African Meeting on Agricultural Commodity Projections, Dakar, 24th-31st May, 1965. Vol.I 105 pp (P), Vol.II Statistical Appendix (xxi and 190 pp).

The countries were considered in four groups: Nigeria; Savannah zone (Gambia, Upper Volta, Mali, Mauritania, Niger and Senegal); South (Ivory Coast, Dahomey, Ghana and Togo); and South-West (Guinea, Liberia and Sierra Leone), of which Nigeria alone accounts for more than half the total population. An attempt is made to give the broad outline of a strategy for the agricultural development of the region, with two major objectives in view: (a) to improve the level of nutrition, in particular, to increase the protein content of the diets in the South and South-West, and (b) to maximise the contribution of agriculture to the economic growth of the region. Projections of demand, trade and production are estimated for each group to 1975. Production problems are examined, and the importance of exports, against the background of an increasing trade gap, is stressed. Important though world prices are, much more could be done to improve the region's bargaining position by means of a common production policy. Investments having been concentrated on production of export crops, especially cocoa, this has tended to lower world prices while at the same time food production has stagnated and food imports have increased. Import substitution should, however, be planned on a regional and not a national basis in order to ensure economies of scale in domestic processing industries. For the savannah zone countries, export prospects on world markets are not encouraging. The landlocked countries must therefore look to the south of the region for an outlet for their exports. Agricultural processing industries could be located in these countries in order to compensate for the attraction of manufacturing industry to port areas. The West African region must not, however, be treated too arbitrarily as a self-contained economic unit, and the need to view it in a world framework is stressed.

MALDANT F B et al Perspectives économiques globales pour treize pays
AFR 213 de l'Ouest Africain. Tableaux des ressources et des emplois des années 1960 et 1970. (Aggregate economic outlook for thirteen West African countries. Output and expenditure tables for 1960 and 1970.) (Paris, SEDES/BDPA, 1964/Ministère de l'Agriculture.) 3 Vols. (211 pp, 227 pp, and 237 pp.)

A study undertaken for the French Ministry of Agriculture mainly to determine future import demand for temperate foodstuffs and exports of tropical foodstuffs in the former French West African territories (except Guinea). Economic data aggregated on a national accounting basis are analysed. Using 1960 as a base year, and with two alternative assumptions regarding future levels of foreign aid to investment, projections for 1970 are presented of output and expenditure, by sectors, for all thirteen countries taken together.

ANON
AFR 214 Study of possibilities of economic co-operation between Ghana, Ivory Coast, Upper Volta, Niger, Dahomey and Togo. (London and Paris, The Economist Intelligence Unit and SEDES, 1969/African Development Bank/Mutual Aid and Guarantee Fund of the Council of the Entente States.) 3 vols. (566 pp) and Annexe of regional imports of major products.

Part I gives a general economic background, including aggregated national accounting data for 1966, 1970 and 1975. Part II analyses the current situation regarding agricultural (pp 76-90) and industrial (including food industries) production, trade, communications, smuggling, and obstacles to trade. Products suitable for trading between Ghana and the Entente countries are considered, either as currently exchanged, or as offering immediate or more remote possibilities for trade. Most existing trade in agricultural produce is illicit. There is some agricultural trade within the Entente. Vols. II and III discuss projects and possibilities for co-operation for trade and industry (including tomato products and glucose) in the region as a whole.

TULIPPE O & WILMET J Géographie de l'agriculture en Afrique Centrale.
AFR 215 Essai de synthèse. (Agricultural geography of Central Africa: a summary.) ("Travaux Géographiques", Liège, 1965, No.150, pp 303-374.)

Includes a critical examination of the 'paysannat' system in former Belgian Africa. (WAERSA 124/1967.)

3. LAND TENURE

RINGER K
AFR 301 Agrarverfassungen in tropischen Afrika. Zur Lehre von der Agrarverfassung: Veränderungen zur Hebung der Agrartechnik. (Land tenure in tropical Africa. A contribution to the theory of land tenure: changes for improving agricultural techniques.) (Freiburg, Rombach, 1963.) 263 pp (P).

The influence of land tenure on land use, and changes in forms of tenure now taking place are discussed. (WAERSA 1925/1963.)

MÜLLER P
AFR 302 Über Formen des Bodenrechts und Betriebstypen in der afrikanischen Landwirtschaft. (Land law and farm types in African agriculture.) ("Zeitschrift der ausländischer Landwirtschaft", Frankfurt/Main, 1965, No.3, pp 261-277.)

Risks of altering traditional social institutions are examined. (WAERSA 2279/1965.)

MANSHARD W
AFR 303 Landbesitz in Tropisch-Afrika. Ein Beitrag zur geographischen Analyse der Agrarverfassungen. (Ownership of land in tropical Africa. A contribution to the geographical analysis

of agrarian systems.) ("Nachrichten der Giessener Hochschulgesellschaft", Giessen, 1965, pp 115-138.)

A comparative study of land ownership and settlement, including the structure of holdings. The influence of colonial regimes on indigenous concepts of land tenure in East, Central, and West Africa is examined, with particular reference to recent field-work in Uganda. Future developments in the pattern of ownership under independent governments are briefly considered.

MURRAY J S
AFR 304
Rapporteur's review of traditional systems of land tenure and soil utilisation. ("Sols africains", Paris, 1962, No.3, pp 341-346.)

Drastic changes in accepted systems of land tenure may have far-reaching effects on the way of life of African peoples. (WAERSA 1240/1964.)

KOUASSIGAN G A
AFR 305
L'homme et la terre. Droits fonçiers coutumiers et droit de propriété en Afrique occidentale. (Man and the land. Customary land tenure and property rights in West Africa.) (Paris, ORSTOM/Berger-Levrault, 1966.) 283 pp (P).

Systems of land tenure involve a major problem for agricultural development, since tenure has a differing significance at different levels of social and economic development. Patterns of transfer of property rights are examined. Current trends seem favourable, notably because of the development of plantations and changes in religious customs.

BACHELET M
AFR 306
Systèmes fonçiers et réformes agraires en Afrique noire. (Land tenure systems and land reform in black Africa.) (Paris, Pichon & Durand Auzias, 1968.) 679 pp (P).

All aspects (legal, economic, sociological, administrative) of the subject are covered, principally but not exclusively for the French-speaking countries. (WAERSA 3220/1968.)

MAINI K M
AFR 307
Land law in East Africa. (Nairobi, Oxford University Press, 1967.) 270 pp (P).

This textbook for students of the University of East Africa describes the development of land law and land registration, and the nature of various kinds of interest in land in Kenya, Uganda, and Tanzania.

SPICAK J G
AFR 308
O roli gosudarsta i prava v preobrazovanii sel'skogo hozjajstva po nekapitaliceskomu puti. (The role of the state and law in the non-capitalist transformation of agriculture.) ("Sovetskoe Gosudarstvo i Pravo", Moscow, 1967, No.5, pp 129-133.)

Agricultural reform in Africa, especially Algeria, Guinea, and Mali, is discussed. (WAERSA 2475/1967.)

4. CO-OPERATIVE FORMS OF ENTERPRISE

DESROCHE E (editor)
AFR 401
Mouvements coopératifs en Afrique noire et à Madagascar. (Co-operative movements in black Africa and Madagascar.) (Paris, BDPA/Collège Coopératif/IFAC, 1964.) 152 pp (P).

A descriptive and comparative analysis of the activities of all types of co-operatives in 20 French- and English-speaking African countries, of which 13 were covered by a special enquiry. Part I summarises the results of previous enquiries carried out since 1953, and considers the general framework of the current enquiry and possible ways of following it up. Part II tabulates the first results of the enquiry, country by country, with a separate chapter by the Editor drawing some general conclusions to serve as guide-posts for future comparative research. Annexes contain the questionnaires used in the enquiry, an extensive bibliography, and supplementary data on the 7 countries not covered by the enquiry.

DESROCHE E
AFR 402
Coopératisme africain: jalons inductifs d'une recherche comparée. (African co-operatives, inductive guide-posts for comparative research.) ("Archives internationaux de Sociologie de la coopération", Paris, 1964, No.16, pp 131-185.)

Reprint of chapter contributed to "Mouvements coopératifs en Afrique noire et à Madagascar" (q.v. AFR 401).

ALEKSANDROVSKAJA L
AFR 403
Kooperativnoe dvizenie v Afrike. Problemy i perspektivy. (Co-operatives in Africa: Problems and prospects.) ("Mirovaja Ekonomika i mezdunarodnye Otnosenija", Moscow, 1963, No.3, pp 39-51.)

Difficulties encountered by officials of newly-independent states in taking over from the British colonial administration and extending the co-operative system are examined. (WAERSA 3239/1964.)

HIRSCHFELD A
AFR 404
Sur quelques expériences coopératives ou pré-coopératives en Afrique noire. (Some experiences with co-operatives and pre-co-operatives in black Africa.) ("Revue des Etudes Coopératives", Paris, 1965, No.1, pp 39-60.)

The experiences of various African countries in matters of co-operation are presented and tables are appended. (WAERSA 793/1966.)

LECOMPTE M
AFR 405
Le problème de la coopérative agricole en Afrique Centrale. (The problem of agricultural co-operation in Central Africa.) ("Annales de Gembloux", Gembloux, 1965, No.2, pp 113-116.)

An examination of the causes of the non-functioning of a large number of African co-operative organisations. (WAERSA 795/1966.)

ROUSSEAU R
AFR 406
Le conditionnement social et psychologique des coopératives d'agriculteurs africains. (The social and psychological conditioning of African co-operative farmers.) ("Action Sociale Catholique", Paris, 1965, No.4, pp 233-250.)

Agricultural co-operatives are shown to be an economic necessity in Africa. (WAERSA 2994/1965.)

WHETHAM Edith
AFR 407
Co-operation, land reform and land settlement. (Report on a survey in Kenya, Uganda, Sudan, Ghana, Nigeria and Iran.) London, Plunkett Foundation for Co-operative Studies, 1968.) 79 pp (P).

The enquiry discusses the part played by co-operative societies in schemes for land reform and land settlement, and assesses the factors which influence their usefulness and success or failure. Co-operative structure, its place in development plans, and experience in different countries are compared, and the value of co-operatives according to their various functions is considered. (WAERSA 1841/1968.)

ANON
AFR 408
Co-operation in some developing countries. Year books of Agricultural Co-operation, 1965 (pp 201-234), 1967 (pp 265-289), and 1968 (pp 279-296). (Oxford, Blackwell/London, Plunkett Foundation for Co-operative Studies.)

Situation reports are included from the following countries (date in brackets indicates the year book containing the most recent report): Botswana (1968), West Cameroon (1965), Ethiopia (1967), Gambia (1968), Ghana (1968), Kenya (1968), Lesotho (1967), Malawi (1965), Nigeria (Federal Republic) (1968), (Northern) (1968), (Eastern) (1965), (Western) (1965), Rhodesia (1965), Sudan (1967), Swaziland (1968), Tanzania (1967), Uganda (1968).

LACROIX J
AFR 409
Les coopératives de consommation dans la stratégie du développement. ("Archives Internationales de Sociologie de la Coopération", Paris, No.15, 1964, pp 62-80.)

The role of consumer co-operatives in development planning.

5. CAPITAL AND CREDIT

MARSON J
AFR 501
Le crédit mutualiste dans l'agriculture africaine et malgache. (Mutual credit in the agriculture of Africa and Madagascar.) ("Notes et études documentaires", Paris, 1964, No.3073, pp 3-21.)

Development trends of mutual co-operatives, the present structure and situation of mutual credit co-operatives and their activity. (WAERSA 2455/1964.)

HIRSCHFELD A
AFR 502
Le crédit agricole et les coopératives rurales de crédit en Afrique noire et à Madagascar. (Agricultural credit and rural credit co-operatives in black Africa and Madasgascar.) ("Revue des Etudes Coopératives", Paris, 1965, No.4, pp 445-64.)

The situation of credit co-operatives in each country and the problems facing them are analysed. (WAERSA 2539/1966.)

JAFFREZIC Y
AFR 503
Crédit agricole et organisation coopérative dans les états de la zone franc et à Madagascar. (Agricultural credit and the organisation of co-operatives in the franc zone states and in Madagascar.) ("Revue des Etudes Coopératives", Paris, 1965, No.141, pp 355-373.)

Bases for an effective credit policy and organisational methods for credit co-operatives are discussed.

BADOUIN R
AFR 504
Le crédit agricole en Afrique sub-saharienne. (Agricultural credit in Africa south of the Sahara.) ("Tiers Monde", Paris, 1966, No.27, pp 619-628.)

Institutional and technical aspects of agricultural credit are discussed.

BELLONCLE G
AFR 505
Crédit coopératif à l'agriculture africaine traditionelle. (Co-operative credit for traditional African agriculture.) ("Archives Internationale de Sociologie de la Coopération", Paris, No.19, 1966, pp 19-45.)

Ten years' experience in the Cameroons and Senegal is described. In the former, co-operative credit schemes were ruined by bad debts. Since members did not in any case expect to see their principal back, its loss proved to be no effective sanction against default. The system adopted in Senegal provides the best model, in the author's view, for other African countries. Besides making advances in kind of seeds, fertilisers, etc., the co-operatives market their members' crops. The profit on these marketing activities and not members' capital contributions are therefore the main source of guarantee for loans obtained from the Development Bank. Rebates to members are withheld if the co-operative is in arrears with interest and amortization payments. Bad debts thus sound an alarm bell. The author stresses the importance of credit not being unlimited and of the borrower himself making some cash contribution to purchases. This has not, however, occurred in Senegal.

HARDEL D
AFR 506
Essai sur le crédit agricole en Afrique noire francophone et Madagascar. (Study of agricultural credit in French-speaking black Africa and Madagascar.) (Paris, CCCE, undated (? 1967)) 115 pp.

Descriptive analysis of the past history, present situation, and future outlook for agricultural credit in the countries studied, its failures and possibilities. The author concludes that agricultural extension is an essential complement to any future progress in agricultural credit, which must be seen as an integral element of economic development.

BELLONCLE G
AFR 507
Le crédit agricole dans les pays d'Afrique d'expression française au sud du Sahara. (Agricultural credit in French-speaking African countries south of the Sahara.) (Rome, FAO, 1968) 162 pp.

Part I considers the general problem of agricultural credit and lessons to be learnt from the past. The Senegal experiment is examined to see how far it provides a model that could be generalised in the light of the requirements of agriculture for credit in Africa and of the problems of credit institutions there. The country studies in Part II are divided into four groups: the savannah countries, Mauritania, Senegal, Mali, Upper Volta, Niger, the CAR, and Chad; the forest countries, Guinea, Ivory Coast, Togo, Dahomey, Gabon, Cameroons, and Congo (Brazzaville); Madagascar; and the former Belgian territories, Congo (Kinshasa), Rwanda, and Burundi. The author concludes with a summary of past failures, current difficulties, and future problems of agricultural credit. Credit should be seen, not in isolation, but as a facet of development as a whole, integrated with its planning, organisation and execution, and closely linked with education. Mixed types of co-operative, covering a number of villages, provide the most efficacious means of communication between farmers and banks in both directions (loans and repayments). Properly managed, such co-operatives should provide the enterprise needed to develop economic growth and accumulate savings which the individual entrepreneur is generally incapable of providing at the present stage.

DIGBY Margaret & SURRIDGE B J
AFR 508
Agricultural investment in developing countries, with special relation to tropical Africa. (London, Plunkett Foundation, 1964.) Occasional Paper No.24, 19 pp.

After a brief consideration of the problems of, and obstacles to, agricultural development, investment objectives are discussed, and the part to be played by co-operatives in their attainment, mainly through the provision of harvest credit, and of farm supplies on credit. The importance of co-operative banks (e.g., in Tanzania) as a means of channelling loans from commercial banks is stressed. It would be desirable for the World Bank to finance co-operative banks so as to enable them also to provide medium-term and (especially for the setting up of co-operative processing plants for agricultural produce) long-term credit.

SHEIRA A Z
AFR 509
Credit aspects of land reform in Africa. ("Agricultural Economics Bulletin for Africa", Addis Ababa, No.7, 1965, pp 36-53.)

A discussion of the credit institutions required to assist the transition from subsistence farming to market agriculture. (WAERSA 1462/1966.)

ARMAD N & BECHER E
AFR 510
Entwicklungsbanken und -gesellschaften in Tropisch-Afrika. (Development banks and companies in tropical Africa.) (Berlin, Springer, 1964 /Munich, Ifo-Institut für Wirtschaftsforschung.) Afrika-Studien, No.1, 86 pp (P).

A descriptive catalogue of banking institutions, including those mainly concerned with agricultural credit, in the franc zone, the Commonwealth, and in Congo (Kinshasa), Rwanda, Burundi, Sudan, Liberia, and Ethiopia. Brief history, present situation and capital structure, and future trends in institutional development are dealt with.

GEIS H G
AFR 511
Die Geld- und Banksysteme der Staaten Westafrikas. (Monetary and banking systems in West African states.) (Munich,

Weltforum-Verlag, 1967/Ifo-Institut für Wirtschaftsforschung.)
Afrika-Studien, No.20, 428 pp (P).

Post-war development, present state, and current problems of agricultural and co-operative credit banks are included in this critical survey.

6. LIVESTOCK PRODUCTION

LACROUTS M & ROBINET A Note sur le développement de la production animale
AFR 601 en Afrique. (Notes on livestock production in Africa.)
(Paris, SEAE, 1969) 50 pp.

Part I analyses the technical and social obstacles to production, mainly as regards cattle raising. Other types of livestock are briefly considered. Part II examines the improvements required in nutrition, distribution, marketing and processing (of animals on the hoof as well as meat and by-products). In conclusion the need is stressed for research, selection of investment priorities, reform of market structures, extension work, and better management.

ANON Etude sur la situation de l'élevage et de la production de
AFR 602 viande dans cinq pays de l'Afrique de l'Ouest. Réunion sous-régionale sur la coopération économique en Afrique de l'Ouest, Niamey, 10-22 octobre, 1966. (Study of cattle raising and meat production in five West African countries. Sub-regional meeting on economic co-operation in West Africa, Niamey, October 10th-22nd, 1966.) (Addis Ababa, FAO/ECA, 1966.) Working paper No.2.

MacGILLIVRAY D *et al* East African livestock survey. (Rome, FAO, 1967.)
AFR 603 2 vols. and Atlas (not released).

Vol.1 (245 pp) Development Requirements. The place of animal production in the national economies of East Africa, especially those of Kenya, Tanzania, and Uganda, and the economic factors affecting livestock development are analysed under a wide range of aspects: land tenure and settlement; aids to investment; agricultural credit; extension services; animal health; research into breeding and nutrition; wild game conservation, ranching, and slaughtering; and fiscal policies for encouraging development. Vol 2 (313 pp) Development plans, methodology for enumerating the livestock population and forecasting changes is discussed. Pastoral resources and internal and external demand for livestock products are assessed. Problems of breeding, production, marketing, slaughtering and processing are considered. There are separate chapters on cattle (for both beef and dairy production), pigs, sheep and poultry. (FAO, 00388-00408/1967.)

PAYNE W J A The relationship between animal husbandry and human
AFR 604 nutritional needs in East Africa. ("East African Agricultural and Forestry Journal", Nairobi, July, 1963, pp 17-25.)

For summary see AFR 9.

LENSCH J Probleme der Fleischviehaltung in Ost-Afrika. (Problems of
AFR 605 livestock rearing for meat production in East Africa.) ("Berichte über Landwirtschaft", Hamburg, 1965, No.2, pp 367-376.)

Production, marketing, and processing of meat and future prospects both for domestic consumption and export are discussed. (WAERSA 686/1966.)

LEDGER H P *et al* Economic background of the stall feeding of beef car le
AFR 606 in East Africa. ("East African Agricultural and Forestry
Journal", Nairobi, 1965, No.1, pp 35-39.)

A micro-economic study. (WAERSA 734/1967.)

HALL M Some economic aspects of dairy farming with reference to East
AFR 607 Africa. (Kampala, Makerere University College, 1966) 17 pp.

The paper discusses factors affecting farm level decisions by farmers producing milk from exotic breeds. (WAERSA 1912/1967.)

RINEY T Conservation and management of African wildlife. (Rome,
AFR 608 FAO, 1967) 39 pp.

HILL P & RINEY T Conservation and management of African wildlife. (Rome,
AFR 608A FAO, 1967) 154 pp.

These two studies (the first covering 10 countries and the second 19 countries), each include an appraisal of the economic aspects of wildlife conservation, especially from the point of view of tourism, export trade and human nutrition. (FAO 01301 & 01302/1967.)

VOHRADSKY F Distribution and economic significance of animal diseases
AFR 609 in Africa. ("Beitrage zur tropischen und subtropischen
Landwirtschaft und Tropenveterinärmedizin", Leipzig, 1965,
No.1, pp 119-129.)

Value of production lost by the principal animal diseases is estimated for each African country.

7. CROP PRODUCTION

CASSE M *et al* Bilan des expériences de culture attelée en Afrique
AFR 701 occidentale d'expression française, Guinée exceptée. (Results
to date of experiments in animal traction in French-speaking
West Africa, excluding Guinea.) (Paris, BDPA, 1966.)

Vol.I (158 pp) summarises experiments completed, interrupted, or still in progress; their crop production, animal husbandry, mechanical, and economic aspects; and reaches general conclusions about past experience and future prospects. Vol.II deals with the experiments and their different aspects (other than economic) in greater detail. Vol.III (166 pp) consists of a detailed economic analysis, with separate sections devoted to Senegal, Mali, Upper Volta, and the Ivory Coast.

MENSAH N Remarques sur l'économie de la culture attelée en Afrique
AFR 702 noire francophone. (Some comments on the economics of animal
traction in French-speaking black Africa.) (Paris, CEFEB,
1967) 47 pp.

The necessary pre-conditions for a successful development of animal traction are set out: suitable soil and climate, local familiarity with feeding and handling of draft animals, adequate extension services, and, above all, a prior understanding by farmers of the need for correct timing and techniques of sowing and cultivations and manuring and the application of pesticides. Only in these circumstances can the introduction of animal traction effectively raise levels of land and labour productivity. Funds invested in extensive promotion of animal traction might often have been employed more profitably for the development of national economies had a large part of them been concentrated on first improving techniques and increasing productivity on manually cultivated holdings. Return on investment should always remain the prime criterion of any plan for promoting animal traction. Experience suggests that official credit schemes should assist purchase of implements but not of draft animals. In conclusion the author suggests an order of priority for government expenditure on subsidising animal traction programmes.

DENIS
AFR 703
Note concernant l'utilisation des engrais dans l'exploitation agricole dans le cadre d'opération de développement rural en Afrique et à Madagascar. (Note on the use of fertilisers on agricultural holdings within the framework of rural development in Africa and Madagascar.) Working paper for conference held at Tananarive 19th-25th November, 1967. (Paris, SATEC, 1967) 57 pp.

Input/output case studies from Upper Volta, Senegal, Dahomey, and Madagascar.

RUTHENBERG H
AFR 704
Probleme des Überganges vom Wanderfeldbau und semipermanenten Feldbau zum permanenten Trockenfeldbau in Afrika südlich der Sahara. (Problems of transition from shift cultivation and semi-permanent arable farming to permanent dry arable farming in Africa south of the Sahara.) ("Agrarwirtscaft", Hanover, 1965, No.1, pp 25-32.)

The author concludes that traditional cultivation systems will have to continue until a forcible change is brought about by lack of land, exhaustion of soil fertility, demographic growth, and increasing demand. (WAERSA 1706/1965.)

IRAT
AFR 705
Les céréales en Afrique. (Cereals in Africa.) ("L'Agronomie Tropicale", Paris, 1968, No.8, pp 878-910.)

A statistical summary of production and trade. Likely future developments are considered in the light of national planning targets.

BADINAND B
AFR 706
Situation économique du riz dans le monde et en Afrique. (The economic situation of rice in the world and in Africa.) ("L'Agronomie Tropicale", Paris, August, 1967, pp 789-799.)

Contains a fairly detailed review of the situation in French-speaking African countries. (WAERSA 1259/1968.)

BADINAND B
AFR 707
L'économie sucrière africaine. Bilans et perspectives. (The sugar economy in Africa. Situation and outlook.) ("L'Agronomie Tropicale", Paris, 1969, No.1, pp 74-89.)

A statistical summary of production, consumption, and trade, and an outline of future plans for production and refining in each of the countries of North (beet-sugar), West, Central, and East Africa.

BADINAND B
AFR 708
Le marché de l'arachide dans le monde et en Afrique. (The market for groundnuts in the world and in Africa.) (Paris, IRAT, 1967) 22 pp.

A statistical summary up to 1965.

WOLF J & CODA-NUNZIANTE G et al
AFR 709
Outlook for production and trade of selected horticultural products in Mediterranean countries. (Rome, FAO, 1967/Conferenza Nazionale per l'Ortofloro-frutticoltura) 41 pp.

Supply and demand outlook, and export prospects for 1970 and 1975, are examined in eleven countries, including Tunisia, Algeria, and Morocco, for citrus and other tree-fruit, table grapes, tomatoes, potatoes, and onions.

PÖSSINGER H
AFR 710
Sisal in Ostafrika. Untersuchungen zur Produktivität und Rentabilität in der bäuerlichen Wirtschaft. (Sisal in East Africa: an enquiry into productivity and profitability in the peasant economy.) (Berlin, Springer-Verlag, 1967/ Munich, Ifo-Institut für Wirtschaftsforschung.) Afrika-Studien, No.13, pp 172 (P).

An investigation of the theoretical and practical opportunities of sisal production by African farmers is followed by a discussion of the merits of various plans. (WAERSA 3153/1967.)

PÖSSINGER H
AFR 711
Possibilities and limitations of smallholding sisal in East Africa. (Munich, Ifo-Institut für Wirtschaftsforschung, 1965) 42 pp.

Smallholdings are not generally speaking suited economically to sisal production.

DE RAUCOURT B
AFR 712
Compte rendu d'un voyage d'étude dans les zones de production sisalière de l'Est et du Sud de l'Afrique. (Report on a study tour of the sisal producing regions of East and South Africa.) ("Coton et Fibres Tropicaux", Paris, No.4, 1967, pp 491-550.)

The general situation in early 1966 in Kenya, Tanzania, Mozambique, and South Africa is reviewed with particular reference to the encouragement of smallholders and to crop diversification through combining sisal growing with beef cattle raising. The results of technical research in Kenya and Tanzania are discussed at some length. (WAERSA 3897/1968.)

ANON
AFR 713
Le coton dans l'économie de l'Afrique noire et de Madagascar. (Cotton in the economy of black Africa and Madagascar.) ("Europe, France, Outremer", March, 1967, pp 16-59.)

A special supplement. Description, and statistics of production in 1966. Summary of official projections of output (mainly to 1969/70 and 1970/71).

CAITA/SEITA/IRAT
AFR 714
Fabrication et commercialisation des tabacs manufacturés dans les états de l'Afrique de l'Ouest. (Cultivation and processing of tobacco and marketing of tobacco goods in West Africa.) ("L'Agronomie Tropicale", Paris, 1963, No.11, pp 1071-1243.)

Tobacco cultivation in Guinea, possibilities in the Upper Volta, production in the Ivory Coast and other West African states. (WAERSA 2606/1964.)

ANON
AFR 715
Intérêt économique d'une culture familiale du tabac en milieu tropical. (Economic importance of domestic tobacco cultivation in a tropical environment.) ("Cahiers de l'agriculture pratique dans les pays chauds", Nogent-sur-Marne, 1965, No.2, pp 85-88.)

The significance of African tobacco in world trade and in the rural economy. (WAERSA 1308/1966.)

MIRACLE M P
AFR 716
Maize in tropical Africa. (Madison, University of Wisconsin Press, 1966, 327 pp.)

An analysis of production, consumption, and distribution. (WAERSA 804/1967.)

8. IRRIGATION

RYDZEWSKI J R
AFR 801
Irrigation development in Africa South of the Sahara. Potentials and possibilities, 1965-1985. (Rome, FAO, 1968) 34 pp & Tables.

The present state of irrigated agriculture and programmes for developing it are described. The relation of these programmes to expected demand for crop water is considered, and a wide range of cognate problems examined: sociological, institutional, technical, economic, and financial.

BADINAND B & ARNOULD J P Evolution des prix à la production et structures
AFR 901 de commercialisation, concernant quelques produits vivriers et d'exportation dans certains pays francophones d'Afrique et à Madagascar. (Trends in producer prices and market structure of a number of food and export crops in certain French-speaking countries of Africa and Madagascar.) (Paris, IRAT, 1967) 50 pp.

Part I Producer prices, during the 'sixties, by product. Part II Market structure and prices in Senegal, Ivory Coast, Togo, Dahomey, Upper Volta, Niger, and Madagascar. Price series are not necessarily the same for all countries.

FAO MARKETING BRANCH, ECONOMIC ANALYSIS DIVISION The marketing of staple
AFR 902 food crops in Africa. Report on the first FAO Training Centre on the marketing of staple food crops for African countries held at Nairobi, 4th-29th August, 1964, and related studies. (Rome, 1965) 87 pp.

Production, supply and demand, and the factors affecting them are examined, as well as the price structure, and problems of transport, storage and processing. The participants expressed concern at the lack of attention given by governments to marketing of locally produced foodstuffs in general and of staple food products in particular. They recommend, *inter* alia, government action on market information, economic research into marmeting problems, research on transport, physical handling, processing, grading and inspection of standards, extension services and training.

FAO
AFR 903 Operation and management of marketing boards in Africa - Report of the FAO Seminar on the operation and management of marketing boards in Africa, held at Ibadan, Nigeria, 11th-30th July, 1966. (Rome, FAO, 1967) 66 pp.

Papers presented to the Seminar included: organisation of marketing, both public and co-operative; aims and price stabilisating roles of marketing boards; their management, staffing and financing; storage, processing and distribution of agricultural products; and determination of costs and returns for setting up product processing plants.

DE FARCY H Freinage à la croissance: attitudes africaines en face des
AFR 904 problèmes de commercialisation des produits agricoles. (A restraint on growth: African attitudes towards the marketing of agricultural products.) ("Tiers-Monde", Paris, 1967, No.29, pp 69-82.)

African governments should have a greater understanding of the needs for better educated traders, more appreciation of the importance of traders, and a less defensive attitude to international trade. (WAERSA 3678/1967.)

WALKER H The market for cassava. (London, Tropical Products Institute,
AFR 905 1966.) TPI Report No. G21, 20 pp and Annexes.

An analysis of world production of cassava and of trade in cassava roots, in the industrial tapioca starch and grocery tapioca derived from them. The main African producers are Togo (4 per cent of world production in 1963-64), and Madagascar (3 per cent). Neither Federal Germany, the largest importer of roots (mainly for animal feed) nor the USA, the largest user of tapioca starch, obtain significant supplies from either country. Over 80 per cent of France's tapioca starch imports in 1964 were from Togo, and 90 per cent of its imports of grocery tapioca came from Madagascar. Togo also supplies nearly half the UK's requirements of tapioca starch which, however, forms a very small proportion of its total starch imports. Cassava roots (dried and sliced) are mainly substituted for barley in compound feeds when barley rises above a certain price. Year to year demand is thus very variable. Angolan cassava, mainly exported to Portugal, commands a premium on the UK market owing to its high quality.

VARIOUS
AFR 906
Markets for tropical products. (London, the Tropical Products Institute.)

A series of publications analysing world production and demand, of whose contents the summary at AFR 905 gives a typical example. Others in the series which concern production in African countries (among others) are listed below.

KAY D E 906A	Banana products, Report No.G32, 1967, 33 pp (P). Angola, Cameroons, Madagascar, Liberia, Nigeria.
KAY D E 906B	Canned pineapple, G14, 1965, 71 pp & Tables. Ivory Coast, Kenya.
DATE A 906C	Cashew nut kernels and CNSL, G11, 1965, 28 pp. Nigeria, Kenya, Mozambique, Tanzania.
BRESLIN P J R 906D	Castor, G30, 1968, 139 pp (P). Ethiopia, Kenya, Liberia, Sudan.
EDMONDS M J 906E	Coir fibre and coir yarn, G18, 1966, 23 pp. Tanzania.
DATE A 906F	Desiccated coconut. An examination of conditions for establishment of its manufacture and sale, G12, 1965, 25 pp.
ANON 906G	Dried, preserved, and fresh ginger, G8, 1964, 24 pp.
ALLEN J L 906H	Kapok fibre and seed, G27, 1966, 23 pp & Tables. Nigeria, Tanzania.
KAY D E 906J	Mango products, G17, 1966, 12 pp. Canning of mangoes in Tanzania has now ceased.
CHESHIRE P C 906K	Papain, G25, 1966, 37 pp & Tables. Congo (Kinshasa), Kenya, Tanzania, Uganda.
MOTT J 906L	Passion fruit juice, G38, 1969, 15 pp (P). Kenya.
KAY D E 906M	Pineapples, G10, 1965, 69 pp. Cameroons, Guinea, Ivory Coast, Kenya.
MARS P A 906N	Robusta coffee, G9, 1967, 98 pp. Angola, Cameroons, Congo (Kinshasa), Dahomey, Ghana, Guinea, Ivory Coast, CAR, Liberia, Madagascar, Malawi, Mozambique, Rhodesia, Sierra Leone, Tanzania, Togo, Uganda; Morocco and Sudan as importers.

ROBINET A
AFR 907
Introduction à l'économie du marché africain de la viande. (An introduction to the economics of meat marketing in Africa.) (Paris, SEAE, 1966) 50 pp.

A descriptive analysis.

ANON
AFR 908
African trade in meat, 1959-63. ("Monthly Bulletin of Agricultural Economics and Statistics", Rome, FAO, 1966, No.1, pp 1-10.)

The distribution of livestock (numbers and density in relation to human population by sub-regions), trade in live animals, exports and intra-African imports of meat and meat products, are analysed. The article concludes with an examination of problems of the African meat trade with developed countries. Obstacles are at present sanitary rather than economic.

BOULARD J
AFR 909
Etude des debouchés de la viande de boeuf africaine et malgache dans le bassin meditérranéen. (Study of market outlets for African and Malagasy beef in the Medeterranean.) (Paris, SEDES, 1964/Ministère de la Coopération) 207 pp.

The market structure, supply, demand, and prices are analysed for each of five markets: those of Spain, Southern Italy, Greece, Lebanon, and Tunisia. The main problems facing exporters to these countries are then examined: quality and presentation; health and other government regulations; price information, and competition from established exporters from other continents; the pooling of refrigerated sea transport and creation of a commercial infra-structure. Action to be taken in the short term on processing of chilled, frozen, and canned beef, and longer-term adaptation of production and marketing methods, in Africa and Madagascar is also proposed.

FAO FORESTRY AND FOREST PRODUCTS DIVISION Trade in wild animals and their products. Second session of ad hoc Working Party on wildlife management, Fort Lamy, 6th-11th February, 1967. (Rome, 1967.) Paper No.9, 5 pp & Tables.
AFR 910

Trade statistics of exports of live animals and animal products, including ivory, hides and skins. (FAO 0024/1967.)

EAST AFRICAN COMMON SERVICES ORGANISATION East African transport study. (London, The Economist Intelligence Unit/Freeman, Fox, Wilbur Smith and Associates, 1969/EACSO/IBRD.) 5 vols. (P).
AFR 911

Vol.3 The Demand for Transport, includes brief studies of the main commodities transported and an analysis of transport flows of crops and livestock, in raw or live form and as processed food products, between 1963 and 1967. There are forecasts of marketed production in 1970 and 1975. Part A (148 pp) considers aggregate flows for East Africa. Part B (294 pp), Part C (233 pp), and Part D (170 pp), analyse the situations in Kenya, Tanzania, and Uganda respectively.

PAYNE W J A The relationship between animal husbandry and human nutritional needs in East Africa. ("East African Agricultural and Forestry Journal", Nairobi, July, 1963, pp 17-25.)
AFR 912

The increase in the cattle populations in Kenya, Uganda, and Tanzania between 1948 and 1958 is examined in relation to the growth of the countries' human populations. It is estimated that if animal protein were freely available at a price which the African population could afford, the maximum daily intake would be 44 gr. per head. Taking the maximum possible annual offtake of cattle as 100 steer equivalents per 1000 head of cattle population and of sheep as 270 head (and of goats about the same number) per 1000, there was a real increase in the potential per capita supply of meat in Kenya during the decade, only a small increase in Uganda, and no increase in Tanzania.

LENSCH J Probleme der Fleischviehaltung in Ostafrika. (Problems of livestock rearing for meat production in East Africa.) ("Berichte über Landwirtschaft", Hamburg, 1965, No.2, pp 367-376.)
AFR 913

For summary see AFR 601.

CADILLAT et al La promotion commerciale des fruits tropicaux (autres que la banane) sur le marché de la CEE. (Promoting sales of tropical fruits, other than bananas, on EEC markets.) (Paris, CGEA/IFAC/Gesellschaft für Marktforschung (Hamburg)/ Gennaro Boston Associates (Milan), 1967/EEC Commission, Directorate-General for Overseas Development, Directorate of Overseas Studies.)
AFR 914

Vol.I (233 pp and Annexes) - General Report. Part 1 describes the current pattern of production of each tropical fruit in the Associated African and Malagasy States. Part 2 describes the EEC market; supply from all sources, organisation and costs of distribution, consumption, methods of sales promotion, and the main obstacles to expanding the market. Part 3 makes a number of recommendations, both general and particular, on measures to be taken by the Associated States to promote sales of tropical fruits, standardisation of market research, employment of agents, use of soft drinks distributors for tropical fruit juices, etc. Vol.II (220 pp and Annexes) describes the supply and demand and market situation for each of the six EEC member countries in turn.

ILLY E
AFR 915

Possibilités d'emploi dans les états membres de la CEE du café robusta produit par les états africains et malgache associés. (Outlook for the utilisation in EEC member countries of robusta coffee produced in the Associated African and Malagasy states.) (Brussels, EEC Commission, Directorate-General for Overseas Development, Directorate of Overseas Studies, 1967) 95 pp.

Part I describes technical aspects of the processing of robusta coffee. Part II examines the demand situation for robusta and the technical implications of increasing its consumption in each of the EEC member countries. Part III summarises the report's technical, legislative, and economic recommendations to both producer and consumer countries. These include improvement in quality and grading; further research into processing methods (freeze-drying, spray-drying, etc.) for production of roasted, soluble, and de-cafeinated coffee; and reduction of excise duties and taxes.

JOHNSTON B F
AFR 916

Etude sur l'importance relative des différentes denrées alimentaires de base en Afrique et particulièrement sur les tendences de la consommation de riz et de blé. (Study of the relative importance of the various basic food products in Africa and particularly of trends in consumption of rice and wheat.) (Rome, FAO, 1964) 49 pp.

JOY L
AFR 917

The economics of food production. ("African Affairs", London, 1965, No.261, pp 317-328.)

The implications of improving diets of subsistence and part-subsistence farmers in Africa and an appraisal of national nutritional problems and the choice of policies to meet them. (WAERSA 1257/1967.)

GORŻELAK E
AFR 918

Wyżwienie ludności afrykańskiej na tle ogólnego rozwoju rolnictwa. (Feeding the African population in the context of the general development of agriculture.) ("Ekonomista", Warsaw, 1967, No.1, pp 133-154.)

The main factors inhibiting the development of agricultural production are examined. (WAERSA 3537/1967.)

MALDANT F B *et al*
AFR 919

Recherches sur les élasticités de l'offre et de la demande: essai d'étude économétrique de quelques problèmes intéressant les pays d'outre-mer. (Research into supply and demand elasticities. Attempt at an econometric study of certain problems affecting overseas countries.) (Paris, SEDES, 1963/Ministère de la Coopération) 201 pp.

Seven problems are examined: 1 & 2. supply elasticities for palm kernel and copra; 3. demand elasticities for oil-seeds in the EEC and some other European countries, and the USA; 4. demand elasticities for rice in French-speaking countries of West Africa; 5. the relationship of food production to gross domestic product in those countries; 6. income elasticities for household expenditure, and comparison of consumer expenditure in those countries with that in France; and 7. the relation of current government expenditure in West African countries to total final expenditure.

KANEDA H & JOHNSTON B F
AFR 920

Urban food expenditure patterns in tropical Africa. ("Food Research Institute Studies", Stanford University, 1961, No.3, pp 229-275.)

This review of budget data collected between 1950 and 1959 for 16 urban communities draws attention to a number of similarities: the large share (only in one case less than 50 per cent) of food to total expenditure; the important position of starchy staple foods; and, where this could be estimated, the high income elasticity of expenditure for 'total food'. The inflationary implications of a rise in food prices is stressed. For methodological reasons expenditure by families in different income groups cannot be reliably compared. But there is a clear contrast between patterns of demand in urban and rural areas, which suggests that further growth of urban population will cause significant changes in the balance of demand between crop and livestock products.

MAY J M
AFR 921
The ecology of malnutrition in Middle Africa. (New York, Hafner, 1965.) Vol.5 in the series Studies in Medical Geography, 255 pp (P). The ecology of malnutrition in Northern Africa (*ibid*), Vol.7 in the series, 275 pp.

Vol.5 covers Burundi, CAR, Chad, Congo (Brazzaville), Congo (Kinshasa), Gabon, Ghana, Nigeria, and Rwanda. Vol.7 covers Algeria, Mauritania, Morocco, and Tunisia. For each country there is background information about the economy and agricultural policy; the adequacy of its food resources and nutrition is assessed; and nutritional disease patterns described. Statistics for Middle Africa are for 1960 or earlier, for Northern Africa up to 1964.

MALDANT F B *et al*
AFR 922
Les consommations alimentaires dans les pays du bloc Ouest-Africain. Approche temporelle d'une élasticité-revenue. (Food consumption in West Africa. A time series approach to income elasticity.) (Paris, SEDES, 1967) 55 pp.

A general appraisal of the problems of establishing income elasticities in West African countries by means of time series. Estimates for individual non-processed and processed foodstuffs are given in separate chapters. Also estimates of elasticities for groups of products and an evaluation of their significance.

RIMMER D
AFR 923
Economic determinants of locally-produced food supplies in West Africa: an analytical framework (from "Markets and marketing in West Africa", proceedings of a seminar held at Edinburgh University, 1966, pp 49-64 (including discussion)).

The importance is stressed of price elasticity as a factor in the adjustment of the composition of food supply to meet changes in the composition of demand as incomes rise. A positive desire to convert leisure into tangible income is noted, as well as a highly elastic demand for income. Food supply should therefore be highly elastic to aggregate real demand, unless there are restraints on supply other than a preference for leisure. These may exist either in production or in distribution. Examples, sociological, technical, and physical, of those in the distributive chain are given. It is a central problem to identify them and find practicable means of breaking them.

PERISSE J
AFR 924
Le rôle des aliments importés et influence du revenu monétaire sur la consommation alimentaire en Afrique. (The role of imported food products and the influence of cash income on food consumption in Africa.) In proceedings of 7th International Conference on Nutrition, Hamburg, 3rd-10th August, 1966. (Rome, FAO, 1967) 15 pp & Tables.

An economic appraisal. (FAO 00932/1967.)

WRIGHT W D C
AFR 925
A determination of demand for food imports into West Africa. (In "African primary products and international trade", Edinburgh University Press, 1965, pp 117-124 (P).)

An examination of the relationship between export earnings from Nigeria, Ghanaian primary products, and the level of imports into these two countries. (WAERSA 1416/1966.)

JONES W O & MERAT C
AFR 926
Consumption of exotic consumer goods as an indicator of economic achievement in ten countries of tropical Africa. ("Food Research Institute Studies", Vol.III, No.1, February, 1962, Stanford University, California, pp 35-60.)

Per capita availability between 1953 and 1957 in each of ten English- and French-speaking countries of 18 imported commodities is examined, and its validity as an indicator of comparative living standards subjected to a number of tests. Five food commodities are included: canned meat, canned fish, evaporated milk, wheat flour, and sugar.

DEAN E R
AFR 927
Studies in price formation in African markets. ("Rhodes-Livingstone Journal: Human Problems in British Central Africa", Lusaka, Manchester University Press, June, 1962, pp 1-20.)

An examination of some non-economic determinants of prices of staple foods in rural markets in Nyasaland and in the city of Brazzaville. See also under MWI 701 and COB 9.

PELE J & LE BERRE S
AFR 928
Les aliments d'origine végétale. (Foods of vegetable origin.) ("Cameroun Agricole, Pastoral et Forestier", Yaoundé, 1967, No.108; 1968, No.109, and 1968, No.110.)

A description, including chemical analysis, of each indigenous food crop by groups (cereals, roots, etc.) and of methods of preparing and eating them. Both French and English common names are given.

TOURY J
AFR 929
Aliments de l'Ouest Africain. Tables de composition. (West African food products. Composition tables.) ("Annales de la Nutrition et de l'Alimentation", Paris, CNRS, 1967, No.2, pp 73-127.)

A description and analysis of foods by main groups: cereals and roots; protein rich foods (animal and plant); fruit and vegetables; oils and fats. There is a glossary, by country and tribe, of local vernacular names.

10. PROCESSING INDUSTRIES

VARIOUS
AFR 1001
Possibilités d'industrialisation des états africains et malgache associés. (The possibilities of industrialising the Associated African and Malagasy States.) (Brussels, EEC, Directorate-General for Overseas Development, Development Studies Directorate, 1967.) 19 vols. (under 16 covers as below) and Summary Report (183 pp).

One of the explicit objects of the Yaoundé Convention is to assist the diversification and industrialisation of the economies of the Associated States. The purpose of this research study was to identify the industrial investments to which priority should be given in each country or group of countries during the period ending 1975. Investments were to be selected which would assist import substitution from developed countries, as well as the export, and expansion of local consumption, of domestic primary products. While due account was to be taken of the principle of comparative advantage, the location of the proposed investments would not necessarily be governed by optimum financial return. Some countries already more industrialised by reason of their sea-board are capable of processing agricultural and other local raw materials as cheaply as, or more cheaply than, land-locked countries. Nevertheless, they would be encouraged to yield priority to their inland neighbours, and forego such investments in favour of those based on the import of non-local raw materials and intermediate products. As far as possible there should be an intra-regional sharing of infrastructure, and multi-national capital investment in individual projects would be encouraged.

The study includes for each of the countries or groups of countries considered, an inventory of current (1965/66) industrial investment and output, and projections for 1970 and 1975. An initial list of 300 substitutable products for local manufacture from which a suitable selection could be made for each country, was drawn up from import statistics for the Associated States as a whole for 1961-1963. Products of heavy industry, capital goods, products whose gross import value in 1963 was under $50,000, and products requiring too complicated processing, too much expatriate management, or too great a scale of production to satisfy any likely future local demand, were all eliminated.

For the study the Associated States were divided into three groups and three individual countries (which, for geographical and other reasons, fell outside the groupings) as indicated in AFR 1001A, 1001B, and 1001C.

JULIENNE R *et al* Le développement industriel dans la zone occidentale.
AFR 1001A (The industrial development of the western region: Ivory Coast, Dahomey, Upper Volta, Mali, Mauritania, Niger, Senegal, and Togo.) Vol.1 (400 pp) Report, Vol.2 (Two parts, 718 pp and 342 pp) Economic examination of the projects, Vol.3 (133 pp) Industrial inventory.

Feasibility studies are presented for new investments in the following food, agricultural, or ancillary industries: milk concentration, fish canning, coarse-grain flour milling, manufacture of margarine, refrigeration and air-conditioning plant, and hand-tools.

OURSIN T *et al* Le développement industriel dans l'UDEAC. (The in-
AFR 1001B dustrial development of the Central African Economic and Customs Union: Cameroon, Congo (Brazzaville), Gabon, Central African Republic and Chad.) Vol.1 (326 pp) Report, Vol.2 (391 pp) Economic examination of the projects, Vol.3 (147 pp) Industrial inventory, Vol.4 (133 pp) Imports and local output of substitute products.

Feasibility studies are presented for new investments in the following agricultural, food, or ancillary industries: extraction of fruit juices and tomato concentrate, malting, and manufacture of cans, bottles and crown corks.

BEZY F *et al* Le développement industriel de la République Démocratique
AFR 1001C du Congo. (The industrial development of the Congo Democratic Republic.) Vol.1 (205 pp) Report, Vols. 2 & 3 (351 pp) Economic examination of the proposals and industrial inventory.

Le développement industriel de la Région des Grands Lacs. (The industrial development of the Great Lakes Region: Rwanda, Burundi, and the Middle Eastern region of Congo (Kinshasa).) Vol.1 (318 pp) Report, Vols. 2 & 3 (481 pp) Economic examination of the proposals and industrial inventory.

Le développement industriel de Madagascar. (The industrial development of Madagascar.) Vol.1 (318 pp) Report, Vols. 2 & 3 (278 pp) Economic examination of the proposals and industrial inventory.

Le développement industriel de la Somalie. (The industrial development of Somalia.) Vol.1 (122 pp) Report, Vols. 2 & 3 (67 pp) Economic examination of the proposals and industrial inventory.

Feasibility studies are presented for new investments in the following agricultural food, or ancillary industries. In the Great Lakes Region: extraction of fruit juices, tomato concentrate, palm oil and palm kernel oil, and pyrethrum; canning of fish, meat, and orange marmalade; pork freezing; malting, tanning and soap manufacturing; manufacture of insecticides, nitrogenous fertilisers and hand-tools;

bottles and cans. In Madagascar: wheat flour milling, malting, and manufacture of condensed milk, soap, cotton textiles, and bottles. In Somalia: extraction of grapefruit juice and powdered banana.

VARIOUS
AFR 1002
La planification et l'encouragement de la transformation industrielle des produits agricoles. (Planning and the encouragement of industrial processing of agricultural produce.) Report of the proceedings of a seminar held in Berlin (Tegel) during June and July 1966 under the auspices of the German Foundation for Developing Countries. (Deutsche Stiftung für Entwicklungsländer.) 569 pp.

The seminar was attended by representatives of 13 French-speaking African countries, FAO, the EEC Commission, and the German government. The texts of eleven papers presented to the whole seminar, and of five given at each of the study groups, are reproduced and subsequent discussions summarised. The groups studied the processing of meat, followed by discussions on German food industries, German overseas aid, and the work of the Foundation. Brief reports on the current state of development of food industries in the participating countries precede a summary of the seminar's main conclusions.

ANON
AFR 1003
Les industries de transformation en Afrique noire francophone et à Madagascar depuis l'indépendance. (Processing industries in French-speaking Africa and Madagascar since independence.) ("Europe, France Outremer", Paris, 1966, No.443, pp 9-96.)

A summary, by countries, of industrial development since independence.

UNITED NATIONS
AFR 1004
Report on a Symposium on Industrial Development in Africa held in Cairo, 27th January-10th February, 1966. (New York, 1967.) 307 pp.

Part I contains a section (pp 219-239) on food and food products industries. Three main aspects of processing are considered: conversion of raw materials into more edible or semi-processed products; processing as a means of preservation; and as a means of meeting consumer demand. There are separate sections on processing protein-rich foods and the utilisation of waste and by-products. Part II contains country reports on Cameroons, Ethiopia, Kenya, Nigeria, Sudan, the UAR, and Zambia.

TROQUEREAU P J A
AFR 1005
Types of government agencies for the promotion and development of the meat industry in the French-speaking countries of tropical Africa and in Madagascar. (Proceedings of the FAO/Danish Government *ad hoc* consultation on abbatoir development held at Roskilde, Denmark, 24th-29th July, 1967, Working Paper, No.5 1(b).)

A brief description of each country, followed by analysis of results obtained from three different types of management of refrigerated abattoirs. The principles, advantages and disadvantages, and current shortcomings of each are considered: A. Fort-Lamy, Chad. Public agency with separate legal entity and financially autonomous. B. Dakar. Public agency managed by a semi-public company, the Société d'Exploitation des Ressources Animales du Sénégal (SERAS). C. Bamako. Public agency managed by a government corporation, the Société Nationale pour l'Exploitation des Abattoirs (SONEA).

STOPFORTH J & O'HAGEN J P
AFR 1006
Structure of the oilseed crushing industry and factors affecting its location, with particular reference to the situation in developing countries. ("Monthly Bulletin of Agricultural Economics and Statistics", FAO, Rome, 1967, No.4, pp 1-9, and No.5, pp 1-15.

Part 1 briefly examines world trade in oilseeds and analyses the extent of crushing facilities in developed importing countries and developing exporting countries; Part 2 compares capital, operating, handling and transport costs. There are separate sections dealing with recent developments in, among other countries, Nigeria and the Sudan.

ORR Elizabeth & ADAIR D
AFR 1007
The production of protein foods and concentrates from oilseeds. (London, Tropical Products Institute, 1967), TPI Report, No. G31, 103 pp and Annexes.

Processing methods and their costs are examined, as well as distribution methods, costs and margins.

ANON
AFR 1008
Sub-regional meeting on co-operation in West Africa, held at Niamey, 10th-22nd October, 1966. (Addis Ababa, FAO/ECA, 1967.) (Ref. E/CN 14/INR/122 &c.)

Report on proceedings includes the following documents:

HESTERMANN J E & THIO GOAN LOO
1008A
Création d'industries alimentaires en Afrique de l'Ouest. (The creation of food industries in West Africa.) 80 pp (and commentary by the Secretariat, 5 pp).

ANON
1008B
L'approvisionnement en produits alimentaires et la coopération économique. (Supply of food products and economic co-operation.) Working paper No.3.

BIEDERMANN K
1008C
Etude préliminaire des posiibilités d'expansion de l'industrie du cuir et de la chaussure en Afrique de l'Ouest jusqu'en 1980. (Preliminary study of the scope for expanding the leather and footwear industry in West Africa up to 1980.)

ANON
1008D
L'industrie des boissons en Afrique de l'Ouest. (The beverage industry in West Africa.)

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

DESCLOITRES R
AFR 1101
Evolution des fonctions de communautés rurales en Afrique. (Changing functions of rural communities in Africa.) ("Sociologie Rurale", Paris, 1965, No.4, pp 349-365.)

A discussion of the effects of technical progress on the social habits, including consumption patterns, of African peasants. (WAERSA 1903/1966.)

AYDALOT P
AFR 1102
Comportement économique, structures agraires et développement. (Economic behaviour, agrarian structures and development.) ("Revue Economique", Paris, 1966, No.2, pp 288-306.)

An outline of the relationship between economic underdevelopment and the sociological and structural pattern of a traditional rural environment based on the agricultural structure of the Maghreb. Attempts at modernisation should be directed to the individual farm and the small co-operative. (WAERSA 2228/1966.)

GODART A L
AFR 1103
Aspects sociaux et culturels du développement rural intégré dans quelques pays d'Afrique occidentale. (Social and cultural aspects of integrated rural development in a number of West African countries.) ("International Labour Review", Geneva, September, 1966, pp 292-312.)

A discussion, mainly based on experience in Cameroons and Dahomey, of the problems involved in rural development plans. The need for preliminary sociological research is stressed.

VERHAEGEN G   Le paysan africain, 'homme traditionnel' ou 'homme
AFR 1104   économique'? (The African peasant: traditional man' or 'economic man'?) ("Cahiers économiques et sociaux", Kinshasa, No.1, 1968, pp 100-127.)

Part I shows how research has in the past often failed to take account of all the socio-economic factors which have led peasants to react against development schemes. Part II considers the factors influencing the African peasant: limitations of soil fertility; communications that are often insufficient for establishing a market economy; price fluctuations (whose effects have been under-estimated); investment in commercial services (price stabilisation, credit, information, etc.), which may be of more value to economic development than investment in factors of production; a tendency to prefer less work to higher returns; and the availability of consumer goods, which affects the marginal utility of money.

Future development projects should take into account the difference between what is considered optimal for development and what peasants want. (WAERSA 4057/1968.)

COLIN R   Animation rurale en Afrique noire. ('Animation rurale' in
AFR 1105   black Africa.) ("Archives Internationales de Sociologie de la Coopération", Paris, No.20, 1966, pp 137-217.)

In French-speaking Africa four main types of agricultural development project can be distinguished. The different extension techniques associated with each, and their technical, economic and social results, are critically examined. The problem of how best to capture the interest of the population in directly participating in its own development is considered. 'Animation rurale' (which could literally be translated as 'rural quickening') is one method. Full analysis of social and psychological factors must form the basis for such action.

GOUSSAULT Y   Animation rurale et participation populaire en Afrique
AFR 1106   noire francophone. (Rural 'animation' and popular participation in French-speaking black Africa.) ("International Labour Review", Geneva, June, 1968, pp 525-550.) (French and English versions.)

The basic concept of 'animation rurale', which stems from the French system of direct centralised rule of its African territories, is that people should be taught and assisted to co-operate with (semi-) governmental institutions and services in carrying out development proframmes. It is a wider concept than community development, based on British ideas of indirect rule and which aims at stimulating a community to action more or less independently of national economic policy. Examples are given of the different ways in which 'animation rurale' is being practised in French-speaking countries on a national, sectoral, or community scale, and through various types of organisations. (Tropical Abstracts r2178/1968.)

McLOUGHLIN P F   Some aspects of the 'heritage' of colonial administra-
AFR 1107   tion on the agricultural development of the new African States. ("Cahiers économiques et sociaux", Kinshasa, 1966, No.3, pp 299-312.)

An examination of the changes which have come about with political independence in the field of agricultural development. (WAERSA 126/1967.)

McLOUGHLIN P F   Beziehungen zwischen Forschung, Planung und Beratung in
AFR 1108   der landwirtschaftlichen Entwicklung tropischen Afrikas. (Relations between research, planning and advisory services in the agricultural development of tropical Africa.) ("Zeitschrift der ausländischer Landwirtschaft", Fankfurt/Main, 1967, No.3, pp 249-263.)

In the author's view research has tended to be almost entirely technical and the sociology and economics of farming have been ignored, to the detriment of extension services. (WAERSA 3538/1967.)

RUTHENBERG H Produktion unter genauer Aufsicht: ein Aussatz zur
AFR 1109 landwirtschaftlichen Entwicklung dargestellt an Beispielen aus Ostafrika und dem Sudan. (Production under close supervision: a first step towards agricultural development, illustrated by examples from East Africa and the Sudan.) ("Schmollers Jahrbuch der Gezetzgebung", Berlin, Verwaltung Volkswirtschaft, 1963, No.6, pp 697-713.)

The relative advantage under tropical conditions of large-scale farming (including co-operatives) and peasant family farms are examined. (WAERSA 1449/1964.)

BELSHAW D G & HALL M Die praktische Nutzanwendung landwirtschaftlicher
AFR 1110 Versuchsergebnisse. Erfahrungen in afrikanischen Entwicklungsländern. (Practical application of the results of agricultural research. Experience gained in developing countries in Africa.) ("Zeitschrift der ausländischer Landwirtschaft", Frankfurt/Main, 1965, No.3, pp 218-243.)

The implications of the findings of recent agricultural research programmes for public policy in African countries are viewed from the short-, medium-, and long-run points of view. (WAERSA 3047/1965.)

STURROCK F G Agricultural economics in West Africa. ("Journal of
AFR 1111 Agricultural Economics", Reading, 1964, No.1, pp 2-12.)

Educational links maintained between France and her former African colonies and between Great Britain and hers are compared. The importance of relating to African problems the aspects of agricultural economics taught to African students in the UK is stressed.

HEALEY D T Agricultural economics in some African countries. ("Inter-
AFR 1112 national Journal of Agrarian Affairs", Oxford, 1964, No.4, pp 250-286.)

Account of an enquiry into the state of agricultural economics in Ghana, Nigeria, Kenya, Tanganyika, Uganda, Rhodesia, Nyasaland, Sudan, Ethiopia, and Madagascar. (WAERSA 2813/1964.)

12. RURAL/URBAN RELATIONS

DE BRIEY P Les agglomérations urbaines et la modernisation des états
AFR 1201 du tiers monde. (Urban growth and the modernisation of developing countries.) ("Civilisations", INCIDI, Brussels, No.4, 1965, pp 453-468, No.1, 1966, pp 3-25.)

Social, economic and political aspects of urban growth are considered: the loosening of tribal ties and, except in the narrowest sense, of the ties of the family as well; severe underemployment; the asymmetrical development of town and country; and, despite the efforts by leaders in some countries to maintain direct communication with the rural population, the centralisation of political and administrative power in the larger cities.

DENIS J Les villes d'Afrique tropicale. (Cities of tropical
AFR 1202 Africa.) ("Civilisations", INCIDI, Brussels, 1966, No.1, pp 26-41.)

After a brief historical background, factors for urban growth, urban demography, and ethnic structureduring the colonial period are examined. Finally, post-independence influences tending further to widen the gap between town and country are considered briefly.

DESCLOITRES R
AFR 1203
Rapport général pour le continent africain et conclusions provisoires. (General report on the African continent and provisional conclusions.) Working papers for the 34th study session of the International Institute for Differing Civilisations (INCIDI), held at Aix-en-Provence, September 1967, 29 pp and 7 pp (P). (English translation.)

During the 'fifties Africa had the highest rate of urban growth of any part of the developing world. This involves a shift of underdevelopment from country to town rather than being a sign of economic take-off. Since African towns usually consume more than they produce, they cannot be seen as poles for growth. A widening gulf is being created between town and country, and the towns themselves are becoming increasingly divided by social, cultural, and economic differences. But the privileged minority is still too weak to create any strong civic sense. Intensification of rural development would slow down the rate of migration from the land, but town planning programmes must be carried out at the same time, so as to create a greater number of small and medium-sized towns within the framework of regional plans, check the growth of the great cities, and begin to reintegrate the urban and rural worlds.

ALKAN W
AFR 1204
Circular migration and the growth of towns in East Africa. ("International Labour Review", Geneva, June, 1967, pp 581-589.)

As urban conditions improve migration ceases to be temporary and an increasing number of persons sever their ties with the countryside. Funds which might have been used to improve agriculture merely help to tilt the balance still more in favour of working in towns instead of remaining in agriculture. While it lasts, therefore, circular migration should not be disparaged but seen as a process that lowers the cost of development. Funds invested by temporary migrants in their families' holdings could, by making them more profitable, check the rate of permanent movement into the cities. (WAERSA 1933/1968.)

KUHNEN F
AFR 1205
Ländliche Beschäftigungsprobleme im tropischen Afrika. (Problems of agricultural employment in tropical Africa.) ("Zeitschrift für ausländische Landwirtschaft", Frankfurt/Main, 1968, No.2, pp 154-180.)

A discussion of measures taken recently in a number of countries to promote rural employment.

13. STATISTICAL SERVICES

THEODORE G & MARCINIAK A
AFR 1301
La statistique agricole dans les pays en voie de développement. (Agricultural statistics in developing countries.) (Paris, SEAE, INSEE, 1968) 221 pp (P).

A teaching manual of methods of collecting agricultural statistics: general principles and examples of different types of enquiry.

ANON
AFR 1302
Methodology of family budget surveys. Joint project no.9. (London, Commission for Technical Co-operation in Africa, 1964.)

Vol.I - East Africa, Rhodesia and Nyasaland, Nigeria, South Africa, Ghana (182 pp). Vol.II - Cameroons, Congo (Brazzaville) (in French) (182 pp). Vol.III - Gabon, Madagascar (in French) (232 pp). Vol.IV - Ivory Coast, Upper Volta (in French) (209 pp). Vol. V - Mali, Niger (in French) (139 pp). Vol.VI - Senegal. Summary of Joint Project No.9 (in French) (130 pp).

The enquiries are designed to cover both urban and rural consumption.

1. NATIONAL PLANNING, SITUATION AND OUTLOOK

ISNARD H
ALG 101
Le Maghreb. (Paris, PUF, 1966) 272 pp (P).

A general geographical, economic, and political account.

LAMBERT T D
ALG 102
La paupérisation du secteur traditionnel et les options de croissance de l'économie algérienne. (The impoverishment of the traditional sector and the alternatives for economic growth in Algeria.) (In "Les développements agricoles en Algérie", Paris, PUF/IEDES, 1962, pp 13-83.)

A discussion of recent action and future priorities for development in the context of Algeria's gravely unbalanced dual economy.

GRIFFIN K B
ALG 103
Algerian agriculture in transition. ("Bulletin of the Oxford University Institute of Economics and Statistics", 1965, No.4, pp 229-252.)

The article reviews all aspects of the agricultural situation and examines problems of development. (WAERSA 19/1967.)

DETOURS J & NECTOUX G
ALG 104
La situation économique en Algérie. (The economic situation in Algeria.) ("Notes et études documentaires", Paris, No.3406-7, July, 1967) 80 pp (P).

A general account of the economy of Algeria before and after independence. Agriculture is dealt with on pp 7-12 and 40-44 respectively. In general, statistical information, such as it is, dates only to 1964. The main bottlenecks - shortage of trained cadres, credit and market organisation - are discussed.

PARODI M
ALG 105
Pour une réforme efficace de l'agriculture algérienne. (Towards an effective reform of Algerian agriculture.) ("Développement et civilisation", Paris, 1963, No.14, pp 27-41.)

The author recommends establishing agricultural co-operatives, re-organising credit facilities, and organising soil improvement projects to reduce local unemployment. (WAERSA 258/1964.)

GUILLOT J
ALG 106
L'amélioration du niveau de vie des population rurales en Algérie. (Raising the standard of living of the rural population in Algeria.) (In "Problèmes de l'Algérie indépendante") (Some problems for independent Algeria) (Paris, PUF, 1963) pp 15-52 (P).

A description of past measures and future plans.

BOBROWSKI C
ALG 107
Agriculture traditionelle en Algérie. (Traditional agriculture in Algeria.) ("Africana Bulletin", Warsaw, 1967, No.6, pp 4-43.)

2. REGIONAL STUDIES

SEDAGRI/BCEOM
ALG 201
Aménagement hydro-agricole de la plaine d'Abadla. (Plan for irrigation and agricultural development of the Abadla Plain.) (Paris, 1968.) Parts I to IV.

Part I is a soil survey. Parts II and III contain technical plans and recommendations for irrigation and drainage works, flood prevention, rural tracks and wind-breaks. Part IV consists of: Vol.1 (127 pp) Sociological and economic study; Vol.2 (100 pp) Annexes thereto; Vol.3 (28 pp) Summary of the Report.

Vol.1 describes the present human and agricultural resources of the area, discusses the constraints on each of the possible forms of agricultural development, and makes recommendations as to which should be adopted. It concludes with a cost benefit analysis of the proposed investments.

REPUBLIQUE ALGERIENNE, MINISTERE DE L'AGRICULTURE. Perspectives
ALG 202 triennales du développement agricole du département de la Grande-Kabylie. (Outlook for agricultural development in the department of Great-Kabylie over the next three years.) (Algiers, Ministère de l'Agriculture et de la Réforme Agraire, Direction départementale de l'agriculture de Grande-Kabylie, 1968) 86 pp and Annexes.

Agricultural description of the region, including available statistics, and development possibilities. Acreages and yields theoretically realisable, and obstacles to their achievement, are examined in the light of available resources, human, financial, technical, and infrastructural, in both the private and self-managed ('auto-géré') sectors.

REPUBLIQUE ALGERIENNE, MINISTERE D'ECONOMIE NATIONALE. Enquête de
ALG 203 développement rural Petite Kabylie. Département de Constantine. Arrondissements: Collo, El Milia, Djidjelli. (Rural development survey of Petite Kabylie, Constantine department (Collo, El Melia, and Djidjelli 'arrondissements').) (Algiers) 165 pp.

A descriptive analysis of the geography and agriculture of the region.

ANON
ALG 204 Etude agro-pédologique et agro-économique de la plaine de Maghnia. (Soil suvvey, agricultural situation and economic aspects of the Maghnia Plain.) (Paris, BDPA, 1966/ République Algérienne Démocratique et Populaire Ministère de l'Agriculture et de la Réforme Agraire) 3 Vols. 489 pp.

Vol.1 is descriptive. Vol.2 includes estimates of investments required, future output, and return on capital.

ANON
ALG 205 Contribution de l'agriculture au développement de l'Oranie. (Agriculture's contribution to the development of the Oran region.) (Algeria, SEDIA/SOGREAH) 82 pp.

Inventory of resources, scope for expanding output, and preliminary sketch of measures to achieve expansion.

PONCET J
ALG 206 Quelques problèmes de l'agriculture algérienne vus à travers l'exemple du département de Tiaret (juin, 1963). (Problems of Algerian agriculture illustrated by the example of the department of Tiaret.) ("Tiers-Monde", Paris, No.18, 1964, pp 211-233.)

The conversion of former estates of 'colons' into worker co-operatives is described. Conclusions are drawn about agricultural development based on producer co-operatives of former salaried workers or share-croppers instead of individual smallholdings. (WAERSA 3259/ 1964.)

3. LAND TENURE

DUMONT R
ALG 301 Des conditions de la réussite de la réforme agraire en Algérie. (Conditions for a successful land reform in Algeria.) (In "Problèmes de l'Algérie indépendante" (Problems of independent Algeria).) (Paris, PUF, 1963) pp 79-123 (P).

Recommendations made to the Algerian government immediately after independence for the management of former colonial properties as well as for the development of the peasant sector. The basic principles of production policy are suggested.

OUWERX E
ALG 302

La réforme agraire en Algérie. (Agrarian reform in Algeria.) (Université Catholique de Louvain, 1964) (thesis) 165 pp.

A critical examination of French and post-independence agrarian policies. Part I analyses the social and economic background to Algeria's dualist agriculture. Part II describes the French reforms of 1965 and the Constantine Plan for economic development. Part III deals with the three stages of the reforms carried out by the Algerian government between 1962 and 1964.

JENHANI H
ALG 303

Einige Probleme der algerischen Revolution. (Some problems of the Algerian revolution.) ("Wirtschaftwissenschaften", Berlin, 1964, No.6, pp 1007-19.)

Principles for the land reform programme, which will embrace 6.7 mn. ha., are described. (WAERSA 1352/1965.)

4. COOPERATIVE FORMS OF ENTERPRISE

SCHMANDT L
ALG 401

Credit co-operatives applied to agriculture in Algeria. (In "Planification et volontariat dans les développements coopératifs" (Planning and voluntary association in co-operative developments).) Proceedings of a study fortnight organised by the Co-operative College, Paris, Jan. 1962. (Paris, Mouton, 1963.)

FOSTER P & STEINER H
ALG 402

The structure of Algerian socialist agriculture (Misc. publication of the Maryland Agricultural Experimental Station, College Park, 1964, No.527) 171 pp.

Reduced production on the recently socialised estate-farms is shown to be not due exclusively to the reorganisation of their management and ownership structure, but also to the social and economic devastation which accompanied the end of the revolution and the first period of independence. Recommendations are made regarding further modifications of the ownership and management patterns which might increase the productivity of the farms' current resources. (WAERSA 2300/1965.)

LAZAREV G
ALG 403

Remarques sur l'autogestion agricole en Algérie. (Some comments on agricultural self-management in Algeria.) (Paris, PUF, 1965) 70 pp. ("Institutions et développement du Maghreb", pp 5-74.)

The author concludes that, whatever the present problems, the transformation to self-managed co-operatives of nationalised European farms seems to have the formula best suited to the disorganised state of newly-independent Algeria, and the least costly in human and economic terms. (WAERSA 4023/1966.)

VON MURALT J
ALG 404

Die Selbstverwaltung in der algerischen Landwirtschaft. (Autonomous management in Algerian agriculture.) ("Zeitschrift für Ausländische Landwirtschaft", Frankfurt/Main, 1966, No.3, pp 231-242.)

Two of the main factors hampering the development of new self-managed farms created from former French colonists' estates are scarcity of competent leaders and lack of credit facilities. (Tropical Abstracts q.396/1967.)

TULOU J
ALG 405

Rapport au gouvernement de la République Algérienne sur la situation du mouvement coopératif. (Report to the Algerian Government on the situation and development of the co-operative movement.) (Geneva, ILO, 1966) 34 pp.

Description of present structure of, and government influence over, agricultural and other co-operatives. Recommendations on future organisation at national and local level, financing, and training in accountancy and management. In the case of agricultural co-operatives there are also recommendations on the replacement of tractors, and the association of producers with processing plants, especially those for fruit juices and sugar.

CHOTARD A
ALG 406
Rapport au gouvernement de la République Algérienne sur le développement du mouvement coopératif: réseau coopératif d'approvisionnement dans le secteur agricole. (Report to the government of the Algerian Republic on developing the co-operative movement, with special reference to the network of supply co-operatives in the agricultural sector.) (Geneva, ILO, 1967) 23 pp.

Description of supply arrangements, in the peasant and modern sectors, for fertilisers, pesticides and tractors. Recommendations are made for proper financing and accounting procedures in the future.

FAO RURAL INSTITUTIONS & SERVICES DIVISION.
ALG 407
Algérie: développement des coopératives agricoles. Rapport au gouvernement. (Report to the government on the development of agricultural co-operatives in Algeria.) (Rome, 1967) 11 pp.

Data on regional agricultural production and agrarian structures, private land tenure, and co-operative farming. Recommendations for government action in organising agricultural credit co-operatives.

6. LIVESTOCK PRODUCTION

BAUMER M
ALG 601
Rapport au gouvernement algérien sur les pâturages et l'élevage sur les hauts plateaux algériens. (Pastures and stock raising in the Algerian highlands.) (Rome, FAO, 1964) EPTA Report 1784, 94 pp.

Includes a proposal for a development programme and suggestions for the role to be played by pasture experts sent to Algeria by FAO. (WAERSA 2380/1965.)

BAUMER M
ALG 602
Rapport au gouvernement de l'Algérie sur l'élaboration d'une politique pastorale algérienne. (Report to the Algerian government on working out a grazing policy for Algeria.) (Rome, FAO, 1965) EPTA Report 2104, 44 pp.

After describing briefly the structure of the pastoral society, this supplementary report makes recommendations on extension services and 'animation rurale', grass-breeding research and varietal trials, and the classification of all grazing lands.

VELDMANN M M
ALG 603
Possibilités d'élevage bovin sur le littoral algérien. (Cattle farming possibilities on the Algerian coastal plain.) (Rome, FAO, 1965) EPTA Report 2046, 21 pp.

Climate, soil fertility, and other factors make intensive dairy farming not only possible but desirable, provided certain operating conditions are observed. These are discussed in the recommendations. (WAERSA 1901/1967.)

KARAN H A
ALG 604
Rapport au gouvernement algérien. Amélioration de l'élevage ovin et caprin. (Report to the Algerian government on improvements in sheep and goat-raising.) (Rome FAO, 1966) 18 pp.

An outline of the current situation (livestock population, 1964; output of meat, 1966) and problems is followed by recommendations on breed improvement, veterinary and shearing services, producer co-operatives, improving pastures and nutrition (including compound feeds), water supplies, and marketing.

7. CROP PRODUCTION

WERTHEIMER M
ALG 701
Des progrès massifs et rapides sont-ils possibles en milieu agricole traditionnel? (Is large-scale and rapid progress possible in a traditional agricultural region?) ("Développement agricoles en Algérie", Paris, PUF, 1962.)

Critical assessment of a number of schemes for encouraging the use of fertilisers with cereals in Kabylie. The answer is yes, subject to a number of important caveats of a technical and economic (notably in matter of price policy) nature.

WARNOD A
ALG 702
Perspectives de la production et du commerce de certains fruits et légumes dans les pays méditerranéens. Rapport sur l'Algérie. (Outlook for production and trade of certain fruits and vegetables in Mediterranean countries. Report on Algeria.) (Rome, FAO, 1967) 49 pp.

Production and trade statistics. Forecast of trends.

9. MARKETING/CONSUMPTION

ANON
ALG 901
Le marché algérien. (Markets in Algeria.) ("Marchés tropicaux et méditerranéens", Paris, June, 1969.) (Available in English.)

A general survey of marketing.

10. PROCESSING INDUSTRIES

ARRIGHI de CASANOVA J *et al*
ALG 1001
Etude de la production de sucre dans le département d'Annaba. (A study of sugar production in the Annaba department.) (Paris, BDPA/SCET/SARES, 1966/République Algérienne Démocratique et Populaire, Ministère de l'Energie et de l'Industrie) 71 pp.

Economic assessment (supply, throughput, siting, transport, labour, and financing) for setting up a sugar refinery.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

ANGOT J P
ALG 1101
L'action de la Direction des Services Agricoles de Grande-Kabylie,ou les problèmes de la vulgarisation en milieu agricole pauvre et surpeuplé. (The work of the Directorate of Agricultural Services in Great Kabylie: extension problems in a poor and overpopulated agricultural area.) (Tizi-Ouzou, Direction des Services Agricoles) 56 pp.

A description of different extension methods employed and of comparative results achieved.

GOUSSAULT Y
ALG 1102
Education des masses et encadrement dans la réforme agraire. (Mass education and the creation of cadres as part of the land reform.) (In "Problèmes de l'Algérie indépendante" (Some problems for independent Algeria).) (Paris, PUF, 1963) pp 53-78 (P).

The problems of ensuring effective peasant participation in the benefits of the land reform are discussed.

12. RURAL/URBAN RELATIONS

CORNATON M Paysans regroupés en Algérie. (Regrouped peasants in
ALG 1201 Algeria.) ("Economie et Humanisme", Paris, 1967, No.172, pp 57-75.)

A general account of the social and economic effects of the compulsory congregation, between 1954 and 1962, of more than two million of the scattered rural population into semi-urban settlements.

BOURDIEU P & SAYAD A Le déracinement. La crise de l'agriculture
ALG 1202 traditionelle en Algérie. (Uprooting. The crisis of traditional agriculture in Algeria.) (Paris, Editions de Minuit, 1964) 225 pp (P).)

Two main results of the uprooting of peasant population by the authorities during the revolutionary war are examined: the crisis facing traditional agriculture and the effect of urban civilisation on the former peasants.

13. STATISTICAL SERVICES

MARKOVIC B Centre de formation en statistiques agricoles et le développe-
ALF 1301 ment des enquêtes statistiques. (An agricultural statistics training centre and the organisation of statistical surveys.) (Rome, FAO, 1965) EPTA Report 1955, 13 pp (not released).

BOTSWANA, 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIC OF BOTSWANA Transitional plan for social and economic develop-
BOT 101 ment. (Gaberones, Government Printer, 1966) 109 pp (P).

Agriculture is dealt with in Chapter IV(pp 15-19). Livestock products and by-products account for 85 per cent of total exports. The Plan sets an export target of 200,000 head of cattle a year, based on a total herd of 2 mn. head. The Meat Commission, which handled 60,000 head in 1967/68, should be handling 90,000 head by 1970/71. There are recommendations on disease and tse-tse fly control, stock and pasture improvement, watering of new areas, control of the number of stock using each bore-hole, extension services, and research.

AMARAL C J Report to the government of Bechuanaland on the food supply
BOT 102 situation. (Rome, FAO, 1965)(EPTA Report 1972, 21 pp.

The food and nutritional situation is described. Targets for future food consumption, by quantity and nutritional value, and for food supply by 1970, are put forward. Recommendations are made for the development of production with a view to improving standards of nutrition. Greater output of fruit and vegetables should be encouraged; game meat is a neglected source of protein; and milk solid residues from butter manufacture are being wasted. Farmers should be encouraged to switch from maize and sorghum to cash crops for export.

5. CAPITAL AND CREDIT

HARRISON A
BOT 501
Agricultural credit in Botswana. (Reading University, Department of Agricultural Economics, 1967/Ministry of Overseas Development/The Freedom from Hunger Campaign) 31 pp.

The working, through the National Development Bank, of the American Revolving Loan Fund is examined. Less than one per cent of farmers had up to then made use of its credit facilities. There is a shortage of trained field staff. The possible risk of grain surpluses needs investigating. There is a need for crop diversification and integrated arable/livestock production. Recommendations are made on administration and training in the field of agricultural credit.

6. LIVESTOCK PRODUCTION

CLAYTON W S & PURNELL G R
BOT 601
The beef cattle and meat industry in Bechuanaland. (Rome, FAO, 1963 (EPTA Report 1783, 74 pp.

Situation, outlook, and problems are analysed.

9. MARKETING/CONSUMPTION

BIGGS H C
BOT 901
Report on marketing of agricultural produce and some aspects of the marketing of livestock in Bechuanaland. (London, Ministry of Overseas Development, 1966) 86 pp.

In accordance with his terms of reference, the author (i) surveys all aspects of internal and external marketing, with particular reference to co-operative marketing and to the most appropriate form of organised market; (ii) reviews the question of grain control and maize imports; (iii) examines which processing industries should be initiated and/or encouraged; and (iv) comments on livestock marketing problems. The commodities whose marketing and processing are considered are maize, sorghum, cotton, citrus, vegetables, dairy products, tobacco, groundnuts, bone-meal, and hides.

10. PROCESSING INDUSTRIES

MURRAY T R
BOT 1001
Report to the government of Botswana on the hides, skins and leather industries. (Rome, FAO, 1967) UNDP Report TP 2304, 31 pp.

A description of the economic aspects of the livestock by-product industry, and of government policy on slaughterhouses, storage of hides and leather, game animal utilisation, and tanning facilities. Recommendations are made for future action. (FAO 00265/1967.)

13. STATISTICAL SERVICES

DHATA Y
BOT 1301
Report to the government of Botswana on the agricultural survey of 1966/67. (Rome, FAO, 1967) UNDP Report TP 2413, 16 pp.

Report on a pilot project surveying agricultural land, including sampling of yields and enumeration of fields. Recommendations and proposed methodology for the 1967 agricultural census.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

DUMONT J *et al* Etude globale de développement du Rwanda et du Burundi.
BUR 101 (Comprehensive development study of Rwanda and Burundi.)
(Brussels, AESED, 1961/EEC) 392 pp (P).

In view of the intention of the two countries to assume separate political identities, the study, made just before independence, deals as far as possible with the development problems of each. Since these have much in common, however, the establishment of a Joint Commission, consisting of ministers from each state, to co-ordinate both planning and action, is strongly urged. Agriculture occupies a major part of the study (pp 123-263). Proposals are made for developing production of food crops (including groundnuts and soya) and livestock, coffee, cotton, palm oil and palm kernel, tobacco, and castor seed. There are special regional development plans for the Bugesera-Mayaga area, which straddles the frontier with Rwanda, the Mosso region in the south-east, and the Ruzizi plain along the western frontier with the Congo and bordering Lake Tanganyika.

KHOI P N Burundi: monographie rédigée pour le Plan Indicatif Mondial.
BUR 102 (Burundi: a monograph drawn up for the World Indicative Plan.)
(Rome, FAO, 1968) 146 pp.

A brief descriptive analysis of the geography, history, and present political and economic situation of the country. Pp 37-73 describe agricultural production, with special reference to livestock raising and the obstacles to its development. Recommendations are made on general principles for aid, including a correct psychological approach to development programmes, as well as on a wide spectrum of technical problems, including animal traction, pasture management, irrigation of temporary leys, veterinary hygiene, cattle breeding, and the disposal of hides.

2. REGIONAL STUDIES

BOURGEOIS A & WOILLET J C Projet de l'aménagement de l'Imbo, plaine de
BUR 201 la Ruzizi. Etude agricole et socio-économique. (Development plan for the Imbo area of the Ruzizi Plain.) (Paris, CFDT, 1965/Royaume du Burundi/Fonds Européen de Développement.)

Vol.1 (BOURGEOIS) (107 pp) makes proposals for reclamation and irrigation of the 3,500 ha. area (now producing subsistence crops and some 250 tons of cotton) so that it could carry 1,000 ha. of rice and/or groundnuts, 2,000 ha. of cotton, and 500 ha. of food crops. A pilot scheme of 1,000 ha. should first be launched, animal traction started up, and an experimental station established. There are also recommendations for extension services, the processing and marketing of rice, cotton, and groundnuts, and the establishment of new farmers in the area.

Vol.2 (WOILLET) deals with social and economic problems, including those arising from the scattered nature of rural life in the area inhibiting communal action, and the memories of the 'paysannats' of the 'fifties, communities whose creation by the colonial power had been accompanied by a certain bulldozing of traditional social susceptibilities. On the principle of 'a bird in the hand', a good deal of resistance will continue to be offered to regrouping by farmers, other than by those perennially affected by flooding. But where it has already occurred those now living in villages recognise its advantages.

9. MARKETING/CONSUMPTION

ANON Le marché du Burundi. (Markets in Burundi.) ("Marchés
BUR 901 tropicaux et méditerranéens", No.1122, May, 1967, pp 1342-1392.
A general survey of the country's markets.

LEURQUIN P Le niveau de vie des populations rurales du Rwanda-Urundi.
BUR 902 (Living standards among the rural populations of Rwanda-Urundi.) (London, Nauwellerts/Institut de Recherches Economiques et Sociales, 1960) 420 pp (P).

The report on a family budget survey which forms the major part of this study (pp 127-326) is preceded by a description of pre-colonial Ruanda-Urundi and of the development of a money economy under Belgian rule. The survey, of a sample of 1,240 households in the central region of the country (straddling the present frontier between Burundi and Rwanda), covered the crop year September 1955 to August 1956. Food production, daily food intake, possession of durables, cash income and expenditure, savings and debts, were the main subjects for exhaustive analysis.

CAMEROONS 1

1. NATIONAL PLANNING AND DEVELOPMENT STUDIES

REPUBLIQUE FEDERALE DU CAMEROUN, MINISTERE DES AFFAIRES ECONOMIQUES ET
CAM 101 DU PLAN. Deuxième Plan quinquennal de développement économique et social (1966-1971). Second Five-Year Plan for Economic and Social Development (1966-1971). (Yaoundé, 1965) 517 pp (P) (in French and English).

Chapter 2 (pp 85-250) on rural production (pp 221-249 cover fishing and forestry) includes targets for 1970/71 for the main plant products. The Plan lists eleven 'integrated projects', some of which are specific regional development plans (e.g., the Ndop Plain), and some of a general nature ('reconversion of banana areas' or 'agro-industrial complexes for oil-palm and tea production'). The section on stock raising lays special stress on raising the rate of utilisation (butchers' beasts per cent of stock) to between 10 and 12 per cent during the 1970-80 decade; on increasing total numbers; and on raising unit carcass weights.

HUGON P Analyse du sous-développement en Afrique Noire. L'exemple
CAM 102 de l'économie du Cameroun. (An analysis of under-development in black Africa: the example of the Cameroon economy.) (Paris, PUF, 1968) 325 pp (P).

Part I describes the institutional obstacles to growth, and Part II the imbalances, demographic, financial, economic, and social, which have characterised the country's growth to date. Part III presents a strategy for growth. The experience of the first two Plans (1960-65, 1966-70) is described. Future policies, budgetary, monetary and commercial, to achieve a general balance are outlined. Detailed proposals are made and priorities suggested for both the primary and industrial sectors in order to redress the imbalance between the two. Educational and employment policies best suited to achieve these aims are discussed in a final section on the planning of human resources.

YONKE J B L'agriculture camerounaise et quelques considérations
CAM 103 générales sur l'économie agricole des pays de l'OAMCE. (Agriculture of the Cameroons and general notes on the agricultural economy of the Afro-Malagasy Organisation for Economic Co-operation.) ("Cameroun agricole pastoral et forestier", Yaoundé, 1963/4, No.71, pp 25-41.)

The economic importance of agricultural production and its recent development are considered in this study. (WAERSA 1847/1964.)

ANON
CAM 104
The population of West Cameroons. (Paris, SEDES, 1966) 203 pp.

The main findings of the 1964 sample survey of population are presented. The social and economic information includes distribution of population by occupation and the structure of local trade. (WAERSA 916/1967.)

2. REGIONAL STUDIES

HALLAIRE A
CAM 201
Koubadji. Etude d'un terroir agricole de l'Adamaoua. (Koubadji. Study of an agricultural area in the Adamaoua.) ("Recherches et Etudes Camerounaises", Paris, ORSTOM, 1962 No.5, pp 48-72.)

Social and economic aspects of a quasi-nomadic community, part of which hives off every generation or so. The contemporary desire for a cash income is likely to render it more stable in future.

CABOT J
CAM 202
Le Bassin du Moyen Logone. (The Central Logone Basin.) (Paris, ORSTOM, 1965) 327 pp (P).

Parts I and II describe the geo-physical, demographic, agricultural and social structure of this region of North Cameroon and Southern Chad. Part III deals with economic and social change during the colonial period. Part IV analyses more recent developments in agriculture, and future problems of communications, education of rural cadres, and the establishment of an entrepreneurial class.

YONKE J B
CAM 203
Les problèmes de la diversification des cultures et de la production agricole au Cameroun oriental. (Problems of diversification in agriculture in the East Cameroons.) ("Cameroun Agricole Pastoral et Forestier", Yaoundé, 1966, No.96, pp 52-58.)

The policy of the Department of Agriculture is not only to increase exports and reduce imports, but change agrarian structure to provide a higher standard of living to the farmer. (WAERSA 1097/1967; Tropical Abstracts, q190/1967.)

VERBRUGGEN M
CAM 204
Développement régional et plan national de développement: l'exemple de la région Centre-Sud du Cameroun oriental. (Regional development and the national development plan: the case of the Central Southern region of East Cameroon.) (Paris, Faculté de Droit et des Sciences Economiques, 1967) (thesis).) 150 pp.

DEROSES & PASQUIER
CAM 205
Rapport sur le rôle et l'organisation de la formation dans le cadre des zones d'actions prioritaires intégrées (ZAPI). (Report on the role and organisation of education within the framework of the CAPIs - integrated zones for priority action.) (Paris, BDPA/CINAM/IPA, 1967) 159 pp.

The report covers both training of extension workers and the direct instruction of farmers and their women in agricultural techniques.

ANON
CAM 206
Projet de périmètre d'actions intégrées le long du Transcamerounais à Bibey, Haute Sanage. (Project for an integrated action zone along the Trans-Cameroon Railway at Bibey, Upper Sanage.) (Paris, CINAM, 1966) 116 pp and Annexes.

Five-year development plan with estimates for growth in production of cocoa, groundnuts, rice, maize, pigmeat, beef and dairy cattle, and fruit.

ANON
CAM 207
Projet de zones d'actions prioritaries intégrées région Centre-Sud. (Project for integrated priority action zones:

Central Southern Region.) (Paris, CINAM, 1966) 122 pp and Annexes (also separate Summary-Dossier de Présentation - 28 pp).)

Five-year development plan includes estimated growth of output and farm income in the cocoa sector.

ANON
CAM 208
Projet de zones d'actions prioritaires intégrées région Est. (Project for integrated priority action zones: Eastern Region.) (Paris, CINAM, 1966) 152 pp and Annexes (also separate Summary Dossier de Présentation - 31 pp).)

Five-year development plan includes estimated growth of output and farm income in the cocoa and coffee sectors.

GLEAVE M B & THOMAS M F
CAM 209
The Bayango valley: an example of land utilisation and agricultural practice in the Bamenda Highlands. ("Bulletin de l'IFAN", Dakar, 1968, No.2, pp 655-681.)

ANON
CAM 210
The Cameroons Development Corporation: reports on policies and activities. (London, P-E Consulting Group Ltd., 1963.) Reports 1 to 16, 300 pp.

Apart from considering the organisation and management of the Corporation, the Reports also deal with aspects of a number of agricultural and associated enterprises in which the Corporation is concerned, including bananas, palms and tea.

ANON
CAM 211
The West Cameroon Development Agency. (London, P-E Consulting Group Ltd., 1965) 31 pp.

A survey of the activities of the Agency in the development of coffee, poultry, frozen meat, furniture, and sawn timber production. The organisation, recent capital expenditure, project planning, credit and internal financial control and sales and stock policy of the Agency are examined.

3. LAND TENURE

BESIS A C
CAM 301
Problèmes de la réforme foncière au Cameroun oriental. (Problems of the reform of land tenure in East Cameroon.) (Rome, FAO, 1964) EPTA Report 1872, 44 pp.

Legal and administrative proposals are made, with recommendations for an order of priority for the types of area to be dealt with.

BROUWERS M J A
CAM 302
Land use and agricultural development of West Cameroon. (Rome, FAO, 1965) EPTA Report 2062, 98 pp.

Brief description of natural and human resources, land tenure systems, and farming and production practices, followed by recommendations for future development of crop and livestock husbandry (including mixed farming and plantations), delimitation of tenurial rights, assessment of credit needs, and improvement of road communications.

KUNDIG-STEINER W
CAM 303
Die Grossplantage CDC in Bota-Victoria. Beispiel einer betrieblichen Kulturlandschaftsgestaltung in West-Kamerun. (The large CDC plantation in Bota-Victoria. An example of the formation of an agricultural landscape in West Cameroon.) ("Geographia Helvetica", Berne, 1965, No.1, pp 14-19.)

An outline of the historical development, present situation, and future problems of the Cameroon Development Corporation in West Cameroon. (WAERSA 1068/1966.)

4. CO-OPERATIVE FORMS OF ENTERPRISE

NGOUE F
CAM 401
Implantation des organismes coopératifs dans la zone cacaoyère au Cameroun (1960-61).. (Setting up co-operatives in the cocoa-producing region of Cameroon (1960-61).) (Yaoundé, IRCAM) 62 pp.

An analysis of organisational problems and farmers' reactions.

BAILLEUX J
CAM 402
Projet de dépulpage coopératif du café arabica dans l'ouest Cameroun. (Plan for a co-operative scheme for de-pulping arabica coffee in West Cameroon.) (Yaoundé, Secrétariat d'Etat au développement rural, 1962) 30 pp.

Mainly technical proposals. The argument for a co-operative solution is also presented.

PFEIFFER L
CAM 403
Regional experience in the South Cameroons. (In "Planification et volontariat dans les développements coopératifs" (Planning and voluntary association in co-operative developments).) Proceedings of a study fortnight organised by the Co-operative College, Paris, January, 1962.) (Paris, Mouton, 1963.)

OBAM MFOU'OU J
CAM 404
L'Union des Coopératives de Café Arabique de l'Ouest: un exemple de succès de la coopération au Cameroun. (The Union of Arabica Coffee Co-operatives of the West: an example of successful co-operatives in the Camerouns.) ("Cameroun Agricole Pastoral et Forestier", Yaoundé, 1965, No.83, pp 17-19.)

Under the influence of the Union, which has an export monopoly for Arabica coffee, the average yearly income in the region has trebled between 1960/61 and 1962/63. (WAERSA 1813/1966.)

5. CAPITAL AND CREDIT

BINET J
CAM 501
Mobilisation des capitaux dans l'économie rurale du Sud-Cameroun. (Mobilisation of capital in the rural economy of South Cameroon.) (In "Les capitaux autochtones et leur mobilisation dans l'économie rurale" (Local capital and its mobilisation in the rural economy).) Proceedings of an International Symposium on Tropical Agricultural Economics, held at the Ministère de la France d'Outre-Mer, Paris, 1956, pp 141-155 (P). (English summary.)

CHRISTOL M
CAM 502
Une expérience de crédit mutuel agricole au Cameroun sous tutelle française. (An experiment in mutual credit in Cameroon under French influence.) (Ibid., pp 240-247 (P).

Six years of development to 1954/55.

BIDET E
CAM 503
Rapport d'éxécution des activités de mise en place et de contrôle des conseillers de crédit rural pour la Banque Camerounaise de Développement. (Report on training and supervising farm credit advisers for the Cameroon Development Bank.) (Yaoundé, oct.1963-juillet 1964.) (Paris, BDPA, 1964) 61 pp.

Report of a two-year mission, on the whole successful, and recommendations for the future.

6. LIVESTOCK PRODUCTION

FRECHOU H L'élevage et le commerce du bétail dans le Nord Cameroun.
CAM 601 (Cattle raising and marketing in North Cameroon.)
(Paris, ORSTOM, 1966) 124 pp (P).

Description and recommendations.

LACROUTS M & SARNIGUET J Le cheptel bovin au Cameroun exploitation,
CAM 602 commercialisation, perspectives d'avenir. (Production and marketing of the Cameroon cattle herd, and future prospects.) (Paris, Ministère de la Coopération, 1965) Vol.I, 259 pp, Vol.II, 145 pp (P).

Vol.I Production, marketing and consumption of meat in North Cameroons, Adamaoua, and West Bamiléké-Bamoun. Vol.II Production, marketing and consumption in South Cameroons. Recommendations for improving production and marketing of meat in the Cameroons.

7. CROP PRODUCTION

REPUBLIQUE FEDERALE DU CAMEROUN, MINISTERE DU PLAN. Développement de
CAM 701 la riziculture dans le Mayo-Danai. Aménagement du seuil de Dana. (Development of rice-growing in the Mayo-Danai region.) (Yaoundé, undated) 70 pp (P).

The report, written from internal evidence in 1961 or 1962, concludes that adoption of its technical recommendations could double disposable cash incomes in the region. An additional chapter describes the activities of the SEMRY (Secteur Expérimental de Modernisation des Rizières de Yagoua) a public corporation started in 1954 to undertake engineering, marketing, and extension work for expanding rice production in North Cameroon.

CHABROLIN R Le secteur expérimental de modernisation de la riziculture
CAM 702 de Yagoua. Etude critique, possibilités de développement. (The Semry. A critical study and future possibilities.) ("Riz et Riziculture et Cultures Vivrières Tropicales", Paris, No.2-3, 1961, pp 57-80.)

Obstacles to development, human, technical and economic, are considered, and recommendations made for their mitigation or removal. Costs per unit of output are estimated.

SORDOILLET R & MAILLAND P Projet de développement de la riziculture
CAM 703 dans le périmètre du Semry (Nord Cameroun). Rapport Préliminaire. (Plans for developing rice production in the Semry perimeter (North Cameroon) Preliminary Report.) (Paris, Ministère de la Coopération, 1966) 111 pp.

A report to the Cameroon government on present problems and future possibilities of further extending the Semry project after twelve years of achievement. Both technical and economic aspects are examined.

CAPOT-REY P, AUDEBERT D et al Enquête agricole pilote. Projet de
CAM 704 développement de la riziculture dans le périmètre du Semry (Nord Cameroun). (A pilot agricultural survey. Proposed development of rice-growing in the Semry perimeter (North Cameroon).) (Yaoundé, République Fédérale du Cameroun, Ministère du Plan et du Développement, 1967) 90 pp.

The object of the survey, which covered a single village, was to establish questionnaires for the eventual main survey. Details are to be obtained of structures and methods of production, yields, and incomes, in order to help assess the effectiveness of land planning and pump irrigation.

COUTY P
CAM 705
Notes sur la production et le commerce du mil dans le département du Diamaré. (Notes on production and marketing of millet in the Diamaré Department.) (Paris, ORSTOM, 1965.) ("Cahiers de l'ORSTOM", 1965, No.4, pp 3-88.)

A supply and demand study, with special reference to the influence of cotton as a substitute crop and to development of markets.

CAMEROUN MINISTERE DU PLAN ET DE L'EQUIPEMENT NATIONAL.
CAM 706
Production et commercialisation des légumes verts au Cameroun. (Production and marketing of green vegetables in Cameroon.) (Yaoundé, 1965) 169 pp. (Report drawn up by SCET/COOP, Paris.)

Conditions for the further development of an already active market-gardening sector in Cameroon are thought to be propitious. Proposals are made for improving marketing, and the setting up of an official organisation to supervise and regulate the market is recommended.

SENN Hélène
CAM 707
Rentabilité de la culture cotonnière en Afrique centrale (Cameroun, RCA, Tchad). Rapport de mission février-mars, 1964. (Profitability of cotton production in central Africa: Cameroon, Central African Republic and Chad. Report on a mission.) (Paris, IRCT, 1965) 21 pp.

A comparison of countries and methods (traditional manual cultivations, animal traction and mechanisation). The key to higher production, by whatever method, is persuading the farmer that adopting new methods will help to raise his income and standard of living, and that this is in itself desirable.

LEMBLE A
CAM 708
Essai de réflexion sur la place du coton dans le développement de l'économie rurale du Nord Cameroun. (Thoughts on the role of cotton in the rural economy of North Cameroon.) (Paris, Centre de Formation des Experts de la Coopération Technique Internationale, 1962) 37 pp.

Development in production during the past decade has been remarkable, but diversification of agriculture, particularly towards livestock, should now be encouraged, and local textile industries vigorously developed in the interests of general economic growth.

ANON
CAM 709
Problèmes de la planification dans la région plurinationale Cameroun. Les investissements et la propagation de leurs effets: la culture du coton au Nord Cameroun. (Planning problems in the multinational region of the Cameroon. Investments and their dispersed effect: cotton-growing in North Cameroon.) (Paris, ISEA, 1965) 2 vols. 105 pp.

Vol.2 analyses the effects, direct and indirect, of investments in cotton production up to 1962. As to the future, their indirect effects are likely to be particularly favourable to North Cameroon, though unimportant for the multinational region as a whole.

NGASSA HEUKAM
CAM 710
La production, la commercialisation et la consommation du café dans la république fédérale du Cameroun, et la conjoncture internationale. (Production, marketing and consumption of coffee in the Cameroon Federal Republic and the international economy.) (Paris, Ecole des cadres et des affaires économiques, 1966) 375 pp. (Dissertation.)

Comprehensive compilation, mainly from official sources.

CHAMPOUD J
CAM 711
L'économie cacaoyère du Cameroun. (Cocoa in the Cameroon economy.) ("Cahiers officiels de Recherche Scientifique et Technique d'Outre-Mer", Paris, 1966, No.3, pp 105-124.)

A general account of coooa production, its income for the grower, its importance for the economy of the country, and its prospects. (WAERSA 2595/1967.)

JULIA H
CAM 712
Enquête préliminaire pour l'étude d'un programme de développement du palmier à huile dans la république fédérale du Cameroun. (Preliminary report on drawing up a development programme for oil palm in the Cameroon Federal Republic.) (Paris, IRHO, Nov-Dec. 1963) 16 pp.

General statement of the problem. Guide lines for research are proposed.

SURRE C
CAM 713
Le palmier à huile au Cameroun: situttion actuelle et programmes de développement. (The Cameroon oil palm industry: present situation and plans for development.) ("Oléagineux", Paris, 1967, No.5, pp 283-294.)

Situation, including research projects, and outlook to 1980.

GEORGES M
CAM 714
La culture attelée et la modernisation rurale dans le Nord Cameroun. (Animal traction and rural modernisation in North Cameroon.) (Paris, BDPA, 1965) 318 pp.

An analysis of ten years' development and future trends. Estimates are given (based on sample surveys) of present ratios of the number of ploughs to population in 35 districts.

CASSE M
CAM 715
Rapport de mission au Nord Cameroun et au Sud du Tchad en 1966 - complément à apporter au bilan des expériences de culture attelée en Afrique francophone. (Report on a mission to North Cameroon and South Chad, 1966 - further assessment of the results of experiments with animal traction in French-speaking Africa.) (Paris, Ministère de la Coopération, 1966) Vol.1 North Cameroon, 44 pp.

A technical report including both a micro- and a macro-economic evaluation of the results.

9. MARKETING/CONSUMPTION

FRECHOU H
CAM 901
L'élevage et le commerce du bétail dans le Nord Cameroun. (Cattle raising and marketing in North Cameroon.) (Paris, ORSTOM, 1966) 124 pp (P).

Description and recommendations.

LACOURTS M & SARNIGUET J
CAM 902
Le cheptel bovin au Cameroun: exploitation, commercialisation, perspective d'avenir. (Production and marketing of the Cameroon cattle herd, and future prospects.) (Paris, Ministère de la Coopération, 1965) Vol.I 259 pp, Vol.II 145 pp (P).

For summary see CAM 602.

TREUIL J P et al
CAM 903
Les prix des produits vivriers dans les marchés de la zone cacaoyère centre du Cameroun. (Prices of food products in the markets of the central cocoa-growing zone.) (Paris, SEDES, 1965) 31 pp.

Results of an enquiry carried out over a 12-month period at markets in Yaoundé, at certain 'arrondissement' centres (those frequented by the inhabitants of the villages sampled in the household budget survey), and in the bush.

PUECHAVY et al
CAM 904
Etude des circuits commerciaux des produits et biens essentiels au Cameroun. (Study of the distributive network for food and necessities in Cameroon.) (Paris, SEDES, 1965/République Fédérale du Cameroun) 5 vols.

Vol.1 (252 pp) Food products - analysis by product. Vol.2 (133 pp) Food products - aggregate analysis, and proposals. Vol.3

(168 pp) Imported products and manufactured goods - the situation analysed. Vol.4 (83 pp) Imports - summary and proposal. Vol.5 (122 pp) General summary and conclusion.

MOUNLOM E J
CAM 905
La commercialisation coopérative au Cameroun. (Co-operative marketing in Cameroon.) (Paris, Collège Coopératif, 1968) (diplôme agréé) 206 pp.

Development of credit co-operatives since 1967 is described. There are three types of marketing co-operatives: the independent Union des Coopératives de Café Arabica (UCCAO); banana, cocoa, and robusta coffee co-operatives, which are all dominated by export firms; and cotton, of which production and marketing is organised on a co-operative basis by a private company.

ONAMBELE X
CAM 906
Les formes coopératives et para-coopératives au Cameroun Oriental, des origines à la loi de 1959. (Co-operative and quasi-co-operative forms of organisation in West Cameroon, from their beginning to the 1959 Las.) (Paris, Collège Coopératif, 1968) (diplôme agréé) 278 pp (typescript).

A detailed history of the co-operative movement in Cameroun since the war, and some lessons for the future and for other developing countries.

GABAIX & RATHERY
CAM 907
Enquête sur le niveau de vie dans la zone cacaoyère centre. (Survey of living standards in the central cocoa-growing zone.) (Paris, SEDES, 1965/République Fédérale du Cameroun, Ministère des Affaires Economique et du Plan) 31 pp. (Final report, Paris, SEAE, 1969, 145 pp.)

Description of methodology, and findings of household budget survey in four rural 'arrondissements' over a period of twelve months.

POLLARD G *et al*
CAM 908
Enquête sur le niveau de vie à Yaoundé. (Survey of living standards in Yaoundé.) (Paris, SEDES, 1965) 5 vols. (Final report, Paris, SEDES/SEAE, 1969.)

Vol.1 (102 pp) Main findings regarding housing conditions of Cameroonese households. Vol.2 (61 pp) Survey of traffic in and out of Yaoundé. Vol.3 (173 pp) Cameroonese household budgets. Vol.4 (101 pp) Markets and their zones of influence. The daily movement of the Cameroonese population. Vol.5 (80 pp) Local expenditure by expatriate households resident in Yaoundé.

WINTER G
CAM 909
Le niveau de vie des populations de l'Adamaoua. (Living standards of the peoples of the Adamaoua.) (Yaoundé, Direction de la Statistique du Cameroun, 1964, 143 pp.)

Research into standards of nutrition, and a family budget survey.

10. PROCESSING INDUSTRIES

LACROUTS M
CAM 1001
Implantation d'une conserverie de viande en zone sahélienne. (Setting up a meat cannery in the Sahelian region.) (Paris, SEDES, 1962) 40 pp.

The report establishes theoretical costs of production based on a small existing plant at Douala. These should serve as a basis for assessing the relative profitability of similar enterprises which might be planned in other countries of the sahelian region.

ANON
CAM 1002
Développement industriel au Cameroun. Rapport préliminaire 1964-54. (Industrial development in Cameroon. Preliminary report 1964-65.) (Paris, SEDES, 1965) 2 vols. 328 pp.

Chapter V in Vol.II (pp 198-256) makes recommendations for the development of processing industries for agricultural products, including cereals, vegetable oils, livestock offals, fruit, and stimulants.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

CHEMINAULT M R Le secteur expérimental de modernisation du Centre-
CAM 1101 Cameroun SEMCENTRE ex SEMAC (Paris, SEDES, 1965/Direction Générale à la Recherche Scientifique et Technique). (Vol. III Section II of "Le développement rural dans les pays d'Afrique Noire d'expression française", pp 53-89.) See AFR 113.

A critical appraisal of the activities of the two public corporations which, between 1953 and 1963, successively attempted to promote the modernisation of cocoa production in Central Cameroons.

GUILLARD J Golonpoui. Analyse des conditions de modernisation d'un
CAM 1102 village du Nord Cameroun. (An analysis of the nature of modernisation in a village in North Cameroon.) (Paris, Mouton, 1965) 502 pp (P).

This comprehensive survey of the natural, social, and agricultural aspects of a compact peasant society includes a detailed analysis of its subsistence agriculture economy.

12. RURAL/URBAN RELATIONS

DIZIAN & CAMBON A Etude sur la population du quartier New-Bell à
CAM 1201 Douala 1956-62. (Study of the population in the New-Bell district of Douala 1956-1962.) ("Recherches et Etudes Camerounaises", Paris, ORSTOM, No.3, 1960, 210 pp.)

Includes a brief section on the motives of the population in moving to the city, and on their future intentions. The authors recognise the sample for this part of the enquiry to have been small and unrepresentative, but the answers are presented for what they are worth.

NZOUANKEU J M Le rôle des villes dans la modernisation du Cameroun.
CAM 1202 (The role of towns in the modernisation of Cameroon.) (Working paper No.40 for the 34th Study Session of INCIDI, Aix-en-Provence, Sept. 1967) 57 pp (P).

Economic, social, administrative and political differences between town and country are analysed, and official policies designed to bridge the wide gap between the two are examined. In the Cameroons towns will of themselves contribute comparatively little to economic growth, but must be treated, where geographically appropriate, as development poles for the countryside. Investment priority must go to better road communications and to industries processing agricultural products.

VIAL J Implantation d'artisanats industriels du tissage en Afrique
CAM 1203 (Niger, Tchad, Cameroun, Hte-Volta). (Setting up artisanal weaving industries in Africa (Chad, Cameroon, Niger and Upper Volta).) (Paris, SEDIAC, 1964) 127 pp.

For summary, see UPV 1203.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE CENTRAFRICAINE: MINISTERE D'ETAT CHARGE DES FINANCES
CEN 101 ET DE L'ECONOMIE NATIONALE, HAUT COMMISSARIAT AU PLAN ET A L'ASSISTANCE TECHNIQUE Plan Quadriennal 1967-1970 (Bouaké, 1966) 5 vols.

Vol.2, Chapter II, Section I (pp 35-105) deals with rural development, including regional programmes. In order to diversify the dependence of the economy on cotton and coffee, more widespread production is planned of palm oil, cocoa, pepper, pineapples, citrus, rubber, tocacco, and market-garden crops. Output of meat, milk, eggs, and poultry is to be increased.

LAFARGE M et al Enquête agricole en République Centrafricaine, 1960-
CEN 102 1961. (Agricultural Survey in the Central African Republic, 1960-1961.) (Paris, INSEE, Service de Coopération, Nov. 1965) 268 pp (P).

Sample survey carried out in Central Oubangui and Western Oubangui to establish data about agricultural population, farm structu5e, area and density of crops, crop rotations, livestock population, and farm equipment.

PETITJEAN J La vie économique de la République Centrafricains. (The
CEN 103 economy of the CAR.) (Paris, BDPA, 1965) 250 pp.

Mainly descriptive, with political commentary. Pp 5 to 90 are devoted to agriculture.

DUMONT R Le difficile développement agricole de la RCA. (Difficulties
CEN 104 of agricultural development in the CAR.) ("Annales de l'INA", Paris, 1966, Vol.IV, pp 55-139.)

A critical appraisal of current problems and policies, in a country with considerable agricultural potential, but whose resources are, mainly due to inefficiency, under-utilised.

2. REGIONAL STUDIES

ANON Avant projet de programmation régionale de la préfecture
CEN 201 de l'Ouham (1964-1969). (Preliminary regional planning project for the Ouham prefecture, 1964-1969.) (Paris, BDPA, 1964) 6 vols.

Vol.A (272 pp) Summary report, including descriptive economic analysis, definition of objectives, and possible measures of intervention by the public authorities. Vol.B (66 pp) Development of the commune of Nana-Bakassa. Pilot project involving development of animal traction, production of cattle for the market, and dissemination of fertilisers and insecticides. Vol.C (74 pp) Water supplies, road communications, and land reclamation. Vol.D (121 pp) Agricultural marketing problems. Analysis and recommendations. Vol.E (121 pp) Report of a sociological mission. Analysis and outline recommendations for modernising farm enterprises. Vol.F (57 pp) Survey of soils and rainfall.

DAVID M Etude d'un programme de développement régional dans la
CEN 202 préfecture de l'Ouham. (Regional development programme for the Ouham prefecture.) (Paris, BDPA/Ministère de la Coopération, 1965) 3 vols. (54 pp, 83 pp, and 105 pp.)

Technical aspects of the execution of proposals made in the BDPA's 1964 project.

ANON Perspectives de développement en Lobaye et Haute Sangha.
CEN 203 (Development prospects in Lobaye and Haute Sangha.) (Paris,

BCEOM, SEDAGRI, OFEROM, 1962) 2 Vols. 175 pp.

Vol.1 comprises an inventory of natural and human resources and considers the outlook for agriculture and forestry output and development of communications. Vol.2 makes recommendations for development of timber, cocoa, palm oil, and rubber production. The importance of raising educational and living standards is stressed. Individual projects proposed for completion in 1968 include a 2,000 ha. palm and 1,500 ha. rubber plantation in Lobaye, and expanding family cocoa plantations in Haute Sangha to 6,000 ha.

VIGNAL P
CEN 204
Avant projet de développement de la Haute Sangha. (Preliminary development project for Upper Sangha.) (Paris, BDPA, 1965) 234 pp. 2 Vols. (112 pp and 122 pp).

Vol.1 analyses the economic problems of this region in the south-western corner of the CAR. Vol.2 makes proposals in the fields of production, extension services, marketing, communications, and financing.

ANON
CEN 205
Opération Haute Sangha. Rapport d'exécution 1966-67. (Operation in Upper Sangha. Progress report 1966-67.) (Paris, BDPA, 1968) 55 pp.

The development of this project has, on balance, proceeded favourably. The reorganisation of marketing remains one of the main objectives still to be accomplished.

4. CO-OPERATIVE FORMS OF ENTERPRISE

MARCELIN R & LECOMTE M
CEN 401
Coopératives agricoles en RCA: projet d'équipement et d'assistance. (Project for aid and equipment for agricultural co-operatives in the CAR.) (Brussels, AGRER, 1964/EEC) 120 pp and Annexes.

Organisation, management, financing and juridicial aspects of co-operatives (including the central Union) are examined, as well as the general production set-up for each major product. Broad principles for the sound management of co-operatives are laid down, on the basis of which recommendations for action are made for co-operatives in 12 different regions, each of whose current throughput and fixed equipment are listed.

GOSSELIN G
CEN 402
Le mouvement coopératif en République Centrafricaine. (The co-operative movement in the CAR.) (Paris, Collège Coopératif, 1964) 29 pp.

Past history, present organisation, and assessment of its economic and social significance.

6. LIVESTOCK PRODUCTION

DE GROOT M H
CEN 601
Rapport intérimaire sur les possibilités de développement de l'industrie laitière en République Centrafricaine. (Draft project report on the establishment of a dairy product industry in the CAR.) (Rome, FAO, 1967) 10 pp.

Sources of milk, its processing and marketing, and economic aspects of the dairy industry. Recommendations for quality control, transportation, storage, and marketing. Also pig production and Bangui experimental dairy farm. (FAO 00020/1967.)

LACROUTS M SARNIGUET J & TYC J Le cheptel bovin de la République Centrafricaine: production, commercialisation, perspective d'avenir. (Production, marketing, and future outlook for cattle in the Central African Republic.) (Paris, SEAE, 1967/RCA Ministère eu Développement) 320 pp (P).
CEN 602

Part I describes nomadic cattle raising by the Bororo, that in the forest zones by the Baoulé, and the development of animal traction. Part II analyses marketing of cattle and meat, present and future (1981-85), demand (including imports), and the special problems of supplying Bangui city. Part III describes development plans and proposals for government intervention in marketing, distribution, and processing.

HYERNARD J Boeufs et vaches à Agoudou-Manga. (Beef and dairy cattle at Agoudou-Manga.) (Abidjan, INADES, 1966) 128 pp.
CEN 603

Description of an experiment in 'animation rurale', and economic results of introducing new farming methods on smallholdings, especially animal traction.

BILLE J C Pâturages du secteur occidental d'élevage de la République Centrafricaine. (Pasture lands of the western livestock raising region of the CAR.) (Paris, IEMVPT, 1964) 284 pp.
CEN 604

AUDRU J & BOUDET G Pâturage de la zone Sud de la République Centrafricaine. (Pasture lands of the southern region of the CAR.) (Paris, IEMVPT, 1964) 213 pp.
CEN 605

Both these studies consist mainly of a technical analysis of the geo-physical situation and plant resources of the regions. The first listed, published six months after the second, concludes with a brief sketch of the desirable directions to be taken by public policy if the resources are to be put to their best use, and social, economic and veterinary impediments to development removed.

CLOE L Evolution de l'aviculture de 1962 à 1966 en République Centrafricaine. (Development of poultry production in the CAR between 1962 and 1966) (Paris, BDPA, undated) 25 pp (typescript).
CEN 606

Recent developments in poultry production, housing, nutrition, and veterinary treatment are described. Per head urban consumption rose from under 1 kg. to 5 kg. during the period. 5,000 Europeans, mainly in Bangui, consume about 1 mn. head of poultry a year.

7. CROP PRODUCTION

SENN Hélène Rentabilité de la culture cotonnière en Afrique centrale (Cameroun, RCA, Tchad). Rapport de mission, fév.-mars, 1964. (Profitability of cotton production in central Africa: Cameroon, Central African Republic, and Chad. Report on a mission.) (Paris, IRCT, 1965) 21 pp.
CEN 701

For summary see CAM 707.

BRAUDEAU J Les possibilités de développement de la culture cacaoyère en République Centrafricaine. (Possibilities of developing cocoa growing in the CAR.) (Paris, IFCC, 1963) 23 pp.
CEN 702

The area in which suitable soil conditions exist is considered promising. Recommendations are made for the development of a 500-hectare plantation. Family enterprises might also be expanded at a rate of about 300 ha. a year of cocoa in the Lobaye region, and of between 200 and 300 ha. a year in Upper Sangha.

ANON Projet de réalisation d'une palmeraie de 3,800 ha. à Bimo (Ombella-M'Poko) et Bosongo (Lobaye). (Plan for a 3,800
CEN 703

hectare oil-palm plantation.) (Paris, ORSTOM/IRHO/BDPA, 1967/République Centrafricaine, Ministère du Développement) 22 pp. and Annexes.

Follow-up study of an earlier regional study (see CEN 203). Though some of the oil produced would be for human consumption most of it would go for soap. Total human consumption of oil is likely to rise to 1,000 tons a year, with a growing demand for groundnut, sesame and cottonseed oil, but palm oil will be required for some years ahead, especially by the poorer sections of the community. Some of the country's present output of 3,000 tons of soap is exported to Chad. The proposed plantation would benefit the economy by employing 1,000 wage-earners, involving the provision of housing and other infrastructure, promoting exports, and encouraging smallholders in the area to produce cash crops for the plantation factory. This should be in production by 1974, with an output of 3,000 tons a year to meet increased internal demand for soap (estimated to have risen to 4,000 tons) as well as export demand.

MOREL R & MERCY M
CEN 704
Un exemple de la mécanisation en agriculture centrafricaine. La CUMA de Grimari. (An example of farm mechanisation in the CAR. The Central Agricultural Station at Grimari.) ("Machinisme agricole tropical", Antony, 1964, No.5, pp 17-42. Also *ibid.*, 1966, No.15, pp 54-80.)

The study sets out the economic results of cropping carried out between 1956 and 1962 on farms supervised by the staff at Grimari using mechanical traction. Costs, yields, and income are detailed.

MOREL R
CEN 705
Une méthode de développement rural: la traction animale dans la préfecture de la Ouaka (A means of rural development: animal traction in the Ouaka prefecture.) ("Machinisme agricole tropical", Antony, 1966, No.13, pp 3-27.)

A complementary study to the one on developments in mechanical traction, but covering 1962 to 1964 only.

d'ANDLAU G *et al*
CEN 706
Etude sur la rentabilité de la culture attelée en RCA, juillet-septembre, 1965. (A study on the profitability of animal traction in the CAR: July-September, 1965). (Paris, Ministère de la Coopération, 1965) 92 pp.

Report on comparative costs of production in three separate areas, and at the Grimari experimental station, of a number of different crops using animal traction. Costs of mechanised production, where undertaken, are also given. The authors conclude that animal traction is, from the social and psychological point of view, an essential intermediate stage in any change from manual production to mechanisation. Nor is any other intermediate solution economically satisfactory.

JANNAUD G & KELLERMAN J
CEN 707
La mécanisation de l'agriculture en République Centrafricaine. (Mechanising agriculture in the CAR.) (Paris, SEAE, 1967/RCA Ministère du Développement) 320 pp.

Report of a mission carried out in Oct./Nov. 1967. The first section is technical: veterinary aspects, animal husbandry and training, methods of cultivation, equipment, training of farmers, rotations. Variations in yields as a function of cultivation methods are described in considerable detail for cotton, groundnuts, sorghum, rice, sesame and maize; results of time studies are given; and profitability assessed on the basis of costings made on different types of holdings. Total area cultivated by animal traction increased from 500 ha. to 1,575 ha. between 1966 and 1967, but its experimental nature is stressed. Operation Bokassa (named after the President of the Republic), whereby more land is being made available for animal traction by means of large-scale mechanised reclamation, is sound in principle, but tighter central control is needed, and costs, including amortisation, must constantly be borne in mind.

DROUOT-BAILLE M
CEN 708

Etude sur la diffusion du crédit agricole et sur la réalisation d'un programme de culture attelée en zone contonnière. (Study of widening the availability of agricultural credit and of carrying out an animal traction programme in cotton-growing areas.) (Paris, CCCE, undated) 24 pp.

The role of credit in promoting the use of animal traction is discussed.

9. MARKETING/CONSUMPTION

ANON
CEN 901

Marché de l'Afrique équatoriale. (Markets in Equatorial Africa.) ("Marchés tropicaux et méditerranéens", No.1042, Oct.1965, pp 2627-2764.)

A general survey of markets in the region.

LACROUTS M *et al*
CEN 902

Le cheptel bovin de la République Centrafricaine: production, commercialisation, perspectives d'avenir. (Production, marketing, and future outlook for cattle in the CAR.) For summary see CEN 602.

FERRIER M
CEN 903

Les problèmes de commercialisation des produits agricoles dans l'Ouham. (Agricultural marketing problems in the Ouham.) (Paris, BDPA, 1964) 121 pp.

Vol.D of the BDPA report listed under CEN 201. Cotton and food crops are considered separately. Existing market channels are described, and costs estimated. There are recommendations for future action on collection, processing, transport, prices, and credit.

DE FONT-REAULX H
CEN 904

Développement rural dans la préfecture de l'Ouham. Etude sur la commercialisation. (Rural development in the Ouham prefecture. A marketing study.) (Paris, BDPA, 1966) 181 pp.

Part I describes the present general organisation of agricultural marketing. Part II considers the problems of each sector in detail and makes recommendations for dealing with them. Part III reviews structural and social obstacles to market development in general and proposes measures for improving equipment, financing, and training of staff for co-operatives.

10. PROCESSING INDUSTRIES

DAVOUT G
CEN 1001

Les industries alimentaires en République Centrafricaine. (Food industries in the CAR.) (Rome, FAO, 1967) 37 pp.

The report considers economic aspects of the industrialisation of food production in relation to the 1967-1971 Five-Year Plan, and the development potential of food products and protein-rich foods and of the food industries. Some nutrition statistics are given. Recommendations are made on food processing, quality control, nutrition research, and technical assistance.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

VERDIER R
CEN 1101

Le recrutement et la formation des cadres moyens agricoles dans la perspective du développement économique des états de Côte d'Ivoire, Niger, République Centrafricaine, et Tchad. (Recruitment and education of middle-grade agricultural cadres seen against the background of economic development in Ivory Coast, Niger, the CAR and Chad.) (Paris, BDPA, 1967) 57 pp.

A study mainly concerned with the importance of linking agricultural education to the requirements of extension services.

12. RURAL/URBAN RELATIONS

THOMAS J M C Les Ngbaka de la Lobaye. Le dépeuplement rural chez une
CEN 1201 population forestière de la République Centrafricaine. (A study of rural depopulation in a forest area of the CAR.) (Paris, Mouton, 1963) 491 pp (P).

Economic problems covered by this study of the background of African migration to cities in 1956/57 include those of agriculture, nutrition, and markets. (WAERSA 3006/1966.)

13. STATISTICAL SERVICES

ANON République Centrafricaine: développement des statistiques
CEN 1301 agricoles courantes. Rapport au gouvernement. (CAR: report to the government on development of current agricultural statistics.) (Rome, FAO, 1967) 15 pp.

The report considers methodology of agricultural statistics on surfaces and yields, production, marketing and prices. Cost benefits analysis of proposed 1969 agricultural census, as well as recommendations on training of personnel and management of statistical services, are included.

CHAD 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DU TCHAD, MINISTERE DU PLAN ET DE LA COOPERATION Premier
CHA 101 Plan quinquennal de développement économique et social 1966-1970. (First Five-Year Plan for Economic and Social Development, 1966-1967.) (Fort Lamy, 1966) 502 pp.

Production targets for 1970 are given for all major products, and the Section on agriculture (192 pp) includes details of a number of regional development schemes. Tables V and VI in the Summary Section of the Plan (20 pp) summarise production of food crops and livestock in 1965 and 1970 (estimated) respectively.

REPUBLIQUE FRANÇAISE, MINISTERE DE LA COOPERATION Travaux du groupe
CHA 102 d'étude sur les effets de l'aide. Etude prospective, diagnostic et besoins en aide extérieure de la République du Tchad. (Findings of the study group on the effects of aid. A study for the future; diagnosis of external aid requirements of the Chad Republic.) (Paris, 1965) 213 pp.

Vol.I analyses the factors, geographical, social and economic, favouring development, and those acting as a brake. Vol.II lists the main priorities (agriculture taking up half of the space devoted to them), and makes recommendations for the allocation of French government aid between them.

2. REGIONAL STUDIES

ANON
CHA 201
Etude de la zone inter-Logone-Tandjile. Rapport de synthèse. (Study of the zone between the Llgone and the Tandjile. Summary report.) (Paris, BDPA, 1969) 47 pp.

An inventory of the physical, human, and agricultural resources of the zone, followed by recommendations for future development, with special reference to immigration from neighbouring areas and to the development of rice production and marketing.

DE LA TOUR J *et al*
CHA 202
Etude agricole de la région du Ouaddai. (Agricultural study of the Ouaddai region.) (Paris, BDPA, 1965) 480 pp. 5 vols.

An extensive analysis of the resources and development needs of an isolated low-rainfall region, and recommendations for action.

PAG MISSION
CHA 203
Report on the rural development of the Ouaddai Region (Rome, FAO, 1967) 66 pp and Annexes.

Review of production, marketing and extension services, with revised plan of operation.

VAYSSIE J
CHA 204
L'avenir économique de la sous-préfecture de Bokoro. (Economic prospects for the Bokoro sub-prefecture.) (Paris, BDPA, 1965) 26 pp (typescript).

The report concludes that livestock production is the most promising field for development. Appropriate measures would enable the cattle population eventually to be doubled.

CABOT J
CHA 205
Le basin du Moyen Logone. (The Central Logone Basin.) (Paris, ORSTOM, 1965) 327 pp (P).

Parts I and II describe the geo-physical, demographic, agricultural, and social structure of this region of North Cameroon and Southern Chad. Part III deals with economic and social change during the colonial period. Part IV analyses more recent developments in agriculture, prospects for industries based on agriculture, and future problems of communications, education of rural cadres, and the establishment of an entrepreneurial class.

ANON
CHA 206
L'opération d'aménagement et de modernisation rurale de Faya Largeau. Préfecture du BET Tchad. Compte-rendu d'éxecution et de situation en fin d'opération au 10 novembre 1966. (Rural reorganisation and modernisation at Faya-Largeau, Borkou-Ennedi-Tibesti prefecture. Final report dated 10 November 1966. (Fort Lamy, BDPA, 1967) 60 pp.

Report of a three-year operation, involving irrigated palm oil production, in an area of Northern Chad with difficult physical and social conditions, formerly used as a French army base.

DE LESPINOIS *et al*
CHA 207
Etude de la vallée du Mandoul. (Study of the Mandoul valley.) (Paris, BDPA, 1967.)

Vol.I General report (323 pp). Vol.II Engineering report (146 pp). Vol.III Annexe 1 Rural enquiry (83 pp), Annexe 2 Sociological commentary (30 pp), Annexe 3 Livestock situation, and proposed action programme (43 pp), Vol.IV Annexe 4 Soil survey (58 pp).

Comprehensive survey of a region whose future development depends mainly on the application of animal traction to cotton growing, with increased livestock production as an essentially long-term aim.

5. CAPITAL & CREDIT

SCHMANDT L
CHA 501
Le crédit agricole au Tchad. (Agricultural credit in Chad.) (Paris, CCCE, 1966) 27 pp.

Assessment of past failures (notably the high level of bad debts) over the previous three years, present situation, and reforms required for the future.

6. LIVESTOCK PRODUCTION

COUGOULIS J N
CHA 601
Tchad: amélioration des principales pistes de bétail de la région est du pays. (Chad: improvement of the main cattle trails in the eastern part of the country.) (Rome, FAO, 1965) EPTA Report 1959, 15 pp.

GASTON A *et al*
CHA 602
Etude agrostologique du Kanem. (Agrostological study of the Kanem region.) (Maisons-Alfort, IEMVT, 1966) 177 pp.

Mainly technical and descriptive, but contains a brief assessment of the cattle-carrying capacity of the pasture lands studied and recommendations for improving it.

AUDRU J
CHA 603
Ensembles pastoraux du Logone et du Moyen Tchari. (Pastoral zones of the Logone and Middle Tchari regions.) (Maisons-Alfort, IEMVT, 1966) 210 pp.

Another mainly technical study. Yields from various types of grasses and by different methods of conservation were measured, but as no feeding experiments were carried out with cattle, conclusions as to the potential productivity of pastures in terms of milk or beef are purely theoretical.

LEVIF J *et al*
CHA 604
Economie pastorale de la région de Moussoro. (The pastoral economy of the Moussoro region.) (Maisons-Alfort, IEMVT, 1966) 129 pp.

Descriptive analysis of production and marketing. Levels of income and personal expenditure are examined, and recommendations made for the development of the cattle population, which had been stationary since 1960.

WOLFF W
CHA 605
Tchad: plan général de développement de l'aviculture. (General plan for developing poultry production in Chad.) (Rome, FAO, 1964) EPTA Report 1795, 9 pp.

The main factors affecting production are briefly examined. Short-term recommendations include expansion of local blood- and bone-meal production; extension of breeding and laying trials; setting up a demonstration flock of 20 birds housed with local materials; a vaccination scheme; and installation of candlers in Fort-Lamy markets to demonstrate egg freshness. Long-term recommendations include setting up two experimental and training centres, which would produce breeding stock for hatcheries as well as eggs and chicken meat commercially for Fort-Archambault and Fort-Lamy, and of five hatcheries each with a demonstration unit. Production of naturally dried offals and of bone-meal at Farch abattoir, as well as dried fish production on a local small-scale basis are also recommended.

7. CROP PRODUCTION

BEZOT P
CHA 701
L'amélioration des cultures cérálières au Tchad. (Improvements in cereal growing in Chad.) ("L'Agronomie Tropicale", Paris, No.1, 1963, pp 128-131.)

The place of cereal production in the economy, and increased productivity found possible on well-managed holdings, are described.

VASSELON R
CHA 702
Rapport au gouvernement du Tchad sur la riziculture vivrière dans le bassin du Mandoul. (Report to the Chad government on growing rice food crops in the Mandoul basin.) (Rome, FAO, 1965) EPTA Report 2027, 61 pp.

This mainly technical report concludes that a considerable expansion of rice production should be possible over a period of ten years.

ANON
CHA 703
Comptes-rendu trimestriels de l'intervention de la CFDT dans les sous-préfectures de Léré, Fianga, Gounou-Gaya, Pala et sur la ferme de Youé. (Quarterly report of the CFDT's activities.) (Campagne 1964-1965.) (Paris, CFDT, 1964-65) 3 vols. 295 pp.

These reports provide a commentary on the day-to-day field work of the officials and employees, both French and Chadian, of the Compagnie Française pour le Développement des Fibres Textiles.

SENN Hélène
CHA 704
Rentabilité de la culture cotonnière en Afrique centrale (Cameroun, RCA, Tchad). Rapport de mission février-mars 1964. (Profitability of cotton production in central Africa: Cameroon, Central African Republic and Chad. Report on a mission) (Paris, IRCT, 1965) 21 pp.

For summary see CAM 707.

GEORGES M ICARD J & CASSE M
CHA 705
La culture attelée et la modernisation rurale dans le sud du Tchad. (Animal traction and rural modernisation in South Chad.) (Paris, BDPA, 1966) 251 pp.

Analysis of past development and future trends. Estimates, based on sample surveys, are given of present ratios of the number of ploughs and carts to population in the various districts of South Chad.

CASSE M
CHA 706
Rapport de mission au Nord Cameroun et au Sud du Tchad en 1966 - complément à apporter au bilan des expériences de culture attelée en Afrique francophone. (Report on a mission to North Cameroon and South Chad, in 1966 - further assessment of the results of experiments with animal traction in French-speaking Africa.) (Paris, Ministère de la Coopération, 1966) Vol.II South Chad, 56 pp.

A technical report including both a micro- and a macro-economic evaluation of the results.

LEVANTE M MONTENEZ J *et al*
CHA 707
Etude des effets économiques de la diffusion des engrais au Tchad. (Study of the economic effects of a wider practice of manuring in Chad.) (Paris, SEDES, 1968/SEAE) 2 vols. 155 pp and 12 pp.

Part I analyses the effects of manuring, both organic and mineral, on yields of cotton and food crops at the IRCT's experimental stations and on peasant holdings. Part II examines the economic effects of manuring, on the individual holding and at national level, and includes a cost benefit analysis of aid in this field by the EEC to the UDEAC and to Chad. Part III considers the outlook for a number of aspects of the problem: application of manuring to crops other than cotton; limitations of mineral fertilisers; improved distribution of fertilisers and use of cotton by-products; and the inter-relation of cotton and fertiliser prices at producer level. At subsidised prices the effect of application of mineral fertilisers on yields and incomes is still linear and there has been little evidence of diminishing returns.

9. MARKETING/CONSUMPTION

DUCRET P
CHA 901
Rapport d'enquête: la consommation du lait et des produits laitiers dans la région de Fort-Lamy. (Report on survey of demand for milk and dairy products in the Fort-Lamy region.) (Rome, FAO, 1967) 31 pp and Annexes.

Study of imports, local supplies, collection, and human and animal demand. Recommendations on a milk factory.

MARNAY P & THEVENIN P
CHA 902
Etude socio-économique de la ville d'Abeche. (Social and economic study of the town of Abeche.) (Paris, SEDES, 1965) 269 pp.

Part 3 of this study analyses the results of an enquiry into household budgets, with special attention being given to the structure of consumption. (WAERSA 3015/1966.)

10. PROCESSING INDUSTRIES

MAUMON
CHA 1001
Installation d'une nouvelle huilerie de coton au Tchad, dans la préfecture du Mayo-Kebbi. (Construction of a new cotton oil plant in Chad, in the Mayo-Kebbi prefecture.) (Paris, Secrétariat d'Etat aux Affaires Etrangeres chargéde la Coopération, 1966.)

Besides technical aspects of setting up a new plant the report considers supply and demand, capital cost, and return on investment.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

ANON
CHA 1101
Opération de modernisation rurale du Centre Est tchadien 1962-1966. (Rural modernisation operation in Central Eastern Chad, 1962-1966.) (Fort Lamy, BDPA, 1966) 26 pp.

Progress report on a typical BDPA project, which was to be extended by a further two years in order to achieve its original objectives more fully and continue the training of Chadian cadres to take over extension and administrative work on the conclusion of the BDPA's contract.

de WILDE J C et al
CHA 1102
Experiences with agricultural development in tropical Africa. (Baltimore, IBRD, 1967) Vol.II Case Studies, Republic of Chad: the work of the Bureau pour le Développement de la Production Agricole (BDPA) in the Bokoro area, pp 337-368.

A consideration of problems and potentialities of the approaches and methods employed in the sub-prefecture of Bokoro, an area where physical and economic conditions are generally unfavourable to the development of agricultural production. The effectiveness of the BDPA's activity was lessened by uncertainty as to the duration and scope of its mandate, by limitation of its extension activities to crop production, essentially groundnuts, and the exclusion of livestock, and by it not being responsible for training local staff as eventual replacements for its own field officers. Nevertheless a good deal of headway was made with developing use of animal traction and of implements, as well as with forming co-operatives for both the purchase of consumer necessities and the marketing of produce, including groundnuts and millet. The success of these enterprises encouraged farmers' confidence in the Bureau's extension activities. The authors observe that little was known about the social structures, values and customs of the population; the work might have been made more effective by a preliminary or at least a simultaneous study of the social factors conditioning agcicultural development.

VERDIER R
CHA 1103
Le recrutement et la formation des cadres moyens agricoles dans la perspective du dèveloppement économique des Etats de

Côte d'Ivoire, Niger, RCA, et Tchad. (Recruitment and education of middle-grade agricultural cadres seen against the background of economic development in the Ivory Coast, Niger, the CAR, and Chad.) (Paris, BDPA, 1967) 57 pp.

For summary see CEN 1101.

MARNAY P
CHA 1104
Les paysannats du Tchad. ('Paysannats' in Chad.) (Paris, SEDES, 1965/Direction Générale à la Recherches Scientifique et Technique.) Vol.III Section III of "Le développement rural dans les pays d'Afrique Noire d'expression française", pp 90-135. See AFR 113.

A critical assessment of the failure of an experiment in rural development which lasted from 1956 to 1962, proving both costly and disappointing, despite some promising features.

12. RURAL/URBAN RELATIONS

VIAL J
CHA 1201
Implantation d'artisanats industriels du tissage en Afrique (Cameroun, Haute Volta, Niger et Tchad.) (Setting up artisanal weaving industries in Africa (Chad, Cameroon, Niger, and Upper Volta.) (Paris, SEDIAC, 1964) 127 pp.

For summary see UPV 1203.

13. STATISTICAL SERVICES

SALAMAT M
CHA 1301
Tchad: développement des statistique agricoles. (The development of agricultural statistical services in Chad.) (Rome, FAO, 1965) EPTA Report 2036, 13 pp.

A sample survey of agricultural production made in 1963 in three cantons of South West Chad is described, together with difficulties encountered. Results of the survey are given and recommendations made for the future collection of agricultural statistics in Chad. (WAERSA 1584/67.)

CONGO (BRAZZAVILLE) 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DU CONGO (BRAZZAVILLE), COMMISSARIAT AU PLAN Plan intérimaire
COB 101
de développement économique et social, 1964-1968. (Intermediate Plan for Social and Economic Development, 1964-1968.) (Paris, 1964) 191 pp (P).

Chapter II Agricultural and Rural Development (pp 43-104), gives overall production targets for each product and lists specific projects to be undertaken. The plan tabulates annual investments, and the income and employment opportunities to be derived from them, in each branch of agriculture.

REPUBLIQUE DU CONGO (BRAZZAVILLE), MINISTERE DE LA RECONSTRUCTION
COB 102
NATIONALE. Premier séminaire, Brazzaville, du 2 au 6 août, 1966. (Report of the First Seminar, Brazzaville, 2 to 6 August, 1966) 71 pp.

Includes a 32-page statement on the agricultural situation by M. Augustin Kombo, Director-General of the Ministry of Agriculture.

2. REGIONAL STUDIES

VIGNAL M
COB 201

Programme de développement de la préfecture de Mossendjo. (Development Plan for Mossendjo prefecture.) (Paris, BDPA, 1965) 130 pp.

Analysis of regional resources and recommendations for future developments in agricultural production and marketing.

CARBON H *et* al
COB 202

Développement rural dans la préfecture Mossendjo. Résultats de 1965 et 1966. Programme de 1967. (Rural development in the Mossendjo prefecture. Results for 1965 and 1966. Programme for 1967.) (Paris, BDPA, 1967) 48 pp.

Progress report on action undertaken.

GANON F
COB 203

Enquête démographique et agricole dans la région du Kouilou. (Demographic and agricultural survey in the Kouilou region.) (Paris, Ministère de la Coopération/INSEE) 177 pp.

Chapter 6 (pp 177) contains a descriptive analysis of agricultural structure and production based on a stratified random sample survey. For a number of reasons, due mainly to lack of time and staff, a special enquiry into banana production carried out at the same time was not considered to have produced significant results.

HAERINGER P
COB 204

L'économie rurale de la région du Mouyondzi. (The rural economy of the Mouyondzi region.) (From "Quinze ans de travaux et de recherches dans les pays du Niari, 1949-1964", (Fifteen years of work and research in the Niari country, 1949-1964). (Brazzaville, ORSTOM/Ministère de la Coopération, 1965/République du Congo) pp 245-293 (P).

A descriptive analysis. Female and male production are examined separately. Average incomes from plantation crops and from livestock production are estimated. The importance of a psychological approach to extension work at local level is stressed.

VENNETIER P
COB 205

Les hommes et leur activité dans le Nord du Congo-Brazzaville. (Men and their activities in Northern Congo-Brazzaville.) ("Cahiers de l'ORSTOM", 1965, No.1, pp 1-296.)

This detailed study of Northern Congo includes a consideration of agro-economic problems and trade. (WAERSA 2073/1966.)

3. LAND TENURE

SORET M
COB 301

Problèmes fonciers chez les Kongo Nord-Ouest. Problèmes de terres ou problèmes démographique? (Problems of land tenure among the North-Western Kongo. A question of land or of population?) ("Cahier de l'ISEA", Paris, 1965, No.166, pp 142-167.)

A study of recent population movements and their effect on the demand for land.

6. LIVESTOCK PRODUCTION

DESCOINGS B
COB 601

Les possibilités pastorales de la cuvette congolaise au sud de la Mambili. (The grazing potential of the Congo basin south of the Mambili.) (Brazzaville, Commissariat au Plan, 1961) 26 pp.

A mainly technical study which concludes that the area's natural resources offer no possibility of livestock rearing, though limited grazing could be obtained off fallows, palm plantations, and green forage crops.

REPUBLIQUE DU CONGO (BRAZZAVILLE), MINISTERE DE L'AGRICULTURE ET DE
COB 602 L'ELEVAGE. Création de deux fermes d'élevage bovin dans la vallée du Niari. (Setting up of two beef-raising farms in the Niari valley.) (1965) 33 pp.

Technical aspects and economic appraisal of a proposed scheme for a substantial increase in marketable output of beef in the Congo over a ten-year period. Application for aid from the European Development Fund.

VALENZA J
COB 603 Création de deux fermes d'élevage bovin dans la vallée du Niari. (Setting up of two beef-raising farms in the Niari valley.) (Paris, BDPA/IEMVT, 1967) 103 pp.

Following a grant aid by the European Development Fund, development of the proposed farms has been contracted, for the first five years, to the BDPA. The Louila ranch (16,000 hectares) will produce finished cattle for slaughter as well as breeding stock for other livestock enterprises. The Lhoma ranch (6,000 ha.) will raise breeding stock and dairy cattle for farmers' co-operatives. The report considers besides the technical aspects of the scheme, cattle purchasing policy (of Senegalese trypanosomiasis-free breeds) and financing.

MANDON A
COB 604 L'élevage dans les pays du Niari. (Livestock raising in the Niari country.) (Paris, BDPA, 1968) 85 pp.

An inventory of human, animal, and natural resources, followed by a description of available means of raising livestock: share-cropping, direct ownership, state and mixed ranches, private enterprises (including sheep and horses), and an experimental station. Possible future development of pig and beef cattle production is considered briefly in the light of grazing resources, types of stock available, and fattening methods suited to the climate. Shortage of Congolese veterinary cadres is a major obstacle.

WOLFF W
COB 605 Plan de développement de l'aviculture. (Plan for developing poultry farming.) (Rome, FAO, 1964) EPTA Report 1799, 9 pp.

Factors affecting the problem are analysed and recommendations made for increased maize production, a vaccination scheme, developing an inexpensive compound feed, and breeding trials crossing local strains with imported. In the longer term a national poultry centre should be set up, which would include a hatchery and demonstration unit for both egg and poultry meat production, and run courses for veterinary and extension workers.

7. CROP PRODUCTION

BRAUDEAU J
COB 701 Projet de création d'une exploitation cacaoyère de type industriel à Elogo. (Project for large-scale cocoa production at Elogo.) (Paris, IFCC, 1964) 31 pp.

Technical recommendations and investment study for the first of a number of plantations planned by the Congo government with the object of promoting both exports and an improvement in production methods among traditional farmers through their demonstration effect.

ANON
COB 702 Développement et modernisation de la production cacaoyère dans la Sangha. (Development and modernisation of cocoa production in Sangha.) Rapport Annuel 1964-1965 34 pp. Résultats 1965-1966, 31 pp. Programme 1966-67, 6 pp. (Paris, BDPA.)

Annual reports of the Elogo project (see COB 701 above), including costing, production, returns, etc.

GERARDIN B
COB 703
Aménagement d'une zone de cultures maraîchères dans la région de Pointe Noire. Etude économique et proposition d'actions ultérieures. (Reorganisation of a market-gardening area in the Pointe Noire region. Economic study and proposals for future action.) (Paris, BDPA, 1967) 175 pp.

The economic advantages of maintaining the activities of a producer marketing committee and improving its efficiency are argued.

JOIN LAMBERT F X
COB 704
Etude sur les fruits et agrumes de la région du Pool. Production et collecte. (Production and distribution of fruit and citrus in the region of the Pool.) (Kinkala, SNCDR, 1963) 26 pp.

Mainly a study of transport costs.

REPUBLIQUE DU CONGO (BRAZZAVILLE), MINISTERE DE LA RECONSTRUCTION, DE L'AGRICULTURE ET DE L'ELEVAGE.
COB 705
Project de modernisation rurale en culture attelée dans la vallée du Niari. (Rural modernisation plan with use of animal traction in the valley of the Niari.) (Brazzaville, BDPA, 1966) 61 pp. Les résultats de l'opération ponctuelle de la vallée du Niari. (Results of systematic action in the Niari valley.) Campagne 1965-1966 (Paris, BDPA, 1967) 23 pp. Les résultats de l'opération culture attelée dans la vallée du Niari. (Results of the animal traction operation) Campagne 1966-1967 (Paris, BDPA, 1968) 34 pp.

General analysis of the economy of the area, including agricultural industries, and progress reports, with calculations of net farm incomes.

9. MARKETING/CONSUMPTION

LIERDEMAN J L & DHONT Y
COB 901
Problèmes socio-économique de la région du Niari. Données globales sur la structure des revenus et leur utilisation. Les dépenses dans la population rurale. (Social and economic problems of the Niari region. Total income and its disposal. The expenditure of the rural population.) (Brazzaville, ORSTOM, 1963) 59 pp.

Part I provides a general introduction to the pattern of income and consumption in an area containing 30 per cent of the country's population. Part II examines personal expenditure in greater detail, especially that on dowries, housing, and alcoholic beverages. The study was designed only as a preliminary examination of problems to be treated with statistical rigour at a later stage.

DHONT Y
COB 902
Les budgets familiaux dans les villages du Niari. (Family budgets in Niari villages.) (From "Quinze ans de travaux et de recherches dans les pay du Niari, 1949-1964".) (Fifteen years of work and research in the Niari country, 1949-1964) (Brazzaville, ORSTOM/Ministère de la Coopération, 1965/République du Congo) pp 49-203 (P).

A comparative study of family budgets in rural villages deriving their money incomes from marketing food crops produced on smallholdings, and from villages where wage-earnings from European enterprises predominated.

DHONT Y
COB 903
Les marchés africains de Pointe-Noire. Notes sur quelques aspects socio-économiques. (Notes on certain social and economic aspects of the African markets at Pointe Noire.) (Brazzaville, ORSTOM, 1963) 97 pp.

Results of an enquiry in which every vendor was questioned during a period of ten days, Findings, including origins of all types of goods sold, are presented, in tabular form.

ANON
COB 904

Les budgets des ménages africains à Pointe-Noire, 1958-1959. Résultats provisoires. (African household budgets at Pointe Noire, 1958-1959. Provisional results.) (Paris, Ministère de la Coopération/INSEE, 1963/République du Congo, Statistique Générale) 26 pp.

Preliminary findings of a two-stage random sample survey of 593 African households carried out over a period of a month. Details are given of consumption, and of auto-consumption from the town dwellers' agricultural holdings; and the influence of household size and of the occupation of head of household on consumption is analysed. Expenditure on individual items or on groups of items is related to total expenditure. A final section examines household incomes.

DEAN E R
COB 905

Studies in price formation in African markets. ("Rhodes-Livingstone Journal: Human Problems in Central Africa", Lusaka, The Rhodes-Livingstone Institute for Social Research/ Manchester University Press, June 1962, pp 1-20.)

For summary see MWI 901.

RIVALS L *et al*
COB 906

Rapport d'évaluation de la situation de l'Office National de Commercialisation des Produits Agricoles de la République du Congo. (Situation report on the National Agricultural Marketing Board.) (Paris, BDPA, 1967) 174 pp and Annexes.

Assessment of the Board's achievements since its foundation in 1964, and its present organisation. Recommended changes.

12. RURAL/URBAN RELATIONS

DEVAUGER R
COB 1201

Les chômeurs de Brazzaville et les perspectives du barrage du Kouliou. (Brazzaville unemployed and the outlook for the Kouliou dam.) ("Cahiers de l'ORSTOM", Série Sciences Humaines, No.2, 1963) 100 pp (P).

A sample survey carried out in 1958 to guage the possibility of getting unemployed to move out to the site of the proposed Kouliou dam. The reactions of those questioned are compared with the views expressed in another enquiry carried out among emigrant Brazzaville workers in the Gabonese mines on local conditions of work, pay, housing, and nutrition.

DEVAUGES R
COB 1202

Etude du chômage à Brazzaville en 1957. (Study of unemployment in Brazzaville in 1957.) ("Cahiers de l'ORSTOM, Série Sciences Humaines, No.4, 1963) 205 pp (P).

Report on a sample survey covering many aspects of the life of the urbanised African worker, including the economic and psychological constraints on his return to village life during periods of unemployment.

VENNETIER P
COB 1203

Une agglomération semi-urbaine en République du Congo. (A semi-urban centre of population in the Congo Republic.) ("Revue Géographique de Lyon", 1961, No.1 pp 51-81.)

A mainly demographic study of Mvouti, including an enquiry into household incomes but not expenditure, and into the extent to which, in relation to the occupation of the head of the household, the women are engaged in agriculture.

VENNETIER P
COB 1204

La vie agricole urbaine à Pointe-Noire. (Agricultural actiiity in the city of Pointe Noire.) ("Cahiers d'Outre-Mer", Bordeaux, 1961, No.53, pp 60-84.)

Results of a survey show that over a quarter of households in the city as a whole (and in some sectors well over half) still had the use of fields on the outskirts of the city in 1960. The proportion is likely to decline gradually as the younger women obtain urban employment and are no longer willing to plant the cassava, maize, potatoes and market-garden crops mainly grown on the suburban plots.

VENNETIER P Causes et conséquences de l'urbanisation au Congo (Brazzaville). (Causes and consequences of urbanisation in Congo (Brazzaville).) ("La Semaine Africaine", Brazzaville, May 1963, pp 1-8.)
COB 1205

A study of the demographic effects of migration on both village and town and, more generally, of the economic effects on production and consumption.

VENNETIER P L'urbanisation et ses conséquences au Congo (Brazzaville). (Urbanisation and its consequences in Congo (Brazzaville).) ("Cahiers d'Outre-Mer", July-Sept. 1963, pp 263-280.)
COB 1206

Informed commentary of a general nature.

VENNETIER P La société industrielle et agricole du Niari (SIAN). (The Niari Industrial and Agricultural Company (SIAN).) ("Cahiers d'Outre-Mer", 1963, No.61, pp 43-80.)
COB 1207

Economic and social influence of an expatriate oil-processing and sugar-refining firm in a small but growing African town, Jacob.

13. STATISTICAL SERVICES

HAZZIVUKOVIC S Le développement des statistiques agricoles. Rapport au gouvernement. (Report to the government on the development of agricultural statistics.) (Rome, FAO, 1967) 18 pp.
COB 1301

Special reference to surveying of crop areas, agricultural census, creation of a statistical service, and methodology of data processing.

CONGO (KINSHASA) 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DEMOCRATIQUE DU CONGO, HAUT-COMMISSARIAT AU PLAN ET A LA RECONSTRUCTION NATIONALE. Plan intérimaire de relance agricole. (Interim plan to reactivate agriculture.) (Kinshasa, 1966) 52 pp (P).
COK 101

On the basis of reports, by three zonal commissions, of stagnant food production provoked by low producer prices (despite high retail prices), the Central Commission for Agriculture recommends a number of measures designed to save imports, promote exports, and establish a marketing system and processing industries. Cadres must be built up again, infra-structure repaired, fraudulent practices suppressed, and a minimum of monetary stability restored. The report lists major studies to be completed or undertaken and lays down an extensive programme of pilot and other projects of livestock and crop production. Investments are spelled out for extension services, breeding stations, road-building and processing industries.

VANDER EYCKEN H & VANDER VORST F Blocages et freinages de la croissance et du développement au Congo (Kinshasa). (Obstacles and impediments to growth and development in the Congo (Kinshasa).) ("Tiers-Monde", Paris, IEDES/PUF, No.30, 1967, pp 411-434.)
COK 102

The isolation of much of the interior of the country during the early 'sixties, owing to the breakdown of transport and the central administration, has caused a sharp decline in agricultural output. This is one stage in a vicious circle of economic stagnation diagnosed by the authors: shortage of technicians and capital in the public sector; deterioration of law and order and infrastructure; isolation of the interior; migration from it; collapse of the fiscal system and deficit budgets; acute inflation; a swollen tertiary sector; and corruption of the public service.

VAN DE WALLE B
COK 103

Essai d'une planification de l'économie agricole congolaise. (Essay in planning the Congo agricultural economy.) (Brussels, INEAC, 1960) Série Technique, No.61, 57 pp (P) and Maps.

A pre-independence study analyses the basic problems facing Congo agriculture.

JURION F & HENRY J
COK 104

De l'agriculture itinérante à l'agriculture intensifiée. (From shifting cultivation to intensified agriculture.) (Brussels, INEAC, 1967) 498 pp (P).

From the records of INEAC's experimental stations in the Congo, Rwanda and Burundi, the authors trace the impact of new techniques on traditional farming methods. Obstacles to and requirements for progress are considered, and the need for technical improvement to go hand in hand with changes in the social system and in the attitudes of the people is stressed. The problems that had to be solved, research results, and their applicability are comprehensively reviewed. (WAERSA 1912/1968.)

COK 104A

(English translation by AGRA Europe) "Can primitive farming be modernised?", Brussels, INEAC, 1969, 450 pp (P).

4. CO-OPERATIVE FORMS OF ENTERPRISE

LE FLOCH G
COK 401

Le mouvement coopératif en République Démocratique du Congo (Léopoldville). Bilan et perspectives. (Co-operative movement in the Congo Democratic Republic (Léopoldville). Achievement and prospects.) (Paris, BDPA, 1964) 45 pp.

A summary of the rather limited development of agricultural co-operation in the Belgian Congo up to the time of independence is followed by recommendations for rehabilitating the movement after the political and economic disturbances which took place between 1962 and 1964. Despite the considerable difficulties to be anticipated, the co-operative movement should be able to play an important part in the agricultural development of the Congo.

N'DONGALA E
COK 402

Développement rural et fonction coopérative dans l'agriculture congolaise avant la décolonisation. (Rural development and co-operative functions in Congolese agriculture before de-colonisation.) ("Cahiers Economiques et Sociologiques", Kinshasa, 1966, No.4, pp 387-433.)

Besides describing the past, the study proposes a rule for co-operatives in the future transition from subsistence to market economy. (WAERSA 2351/1967.)

6. LIVESTOCK PRODUCTION

MWAMUFIYA V
COK 601

Choix économique de modes de production des protéines animales en République Démocratique du Congo. (Economic choice for methods of producing animal protein in the Congo Democratic Republic.) ("Etudes Congolaises", Kinshasa, 1969, No.2, pp 55-80.)

Study of costs of production does not lead to a single solution excluding all others. Fish farming promises the highest yields, but high investment costs would prevent this mass source of protein becoming available at a relatively low price. Sea and lake fishing provides the most immediately satisfactory solution. In the long term large-scale poultry production will be possible, but much preliminary extension work is required. Extensive beef raising is also a possibility in certain areas (notably the watershed between Katanga and the two Kasais), and at low cost, but this is also a long-term solution. The present wide margin between producer and retail prices also requires to be reduced if adequate supply responses are to be stimulated and consumption raised.

7. CROP PRODUCTION

BERG B R
COK 701

Nigeria, Senegal and the Congo (Kinshasa). The projected level of demand, supply and exports of oilseed products to 1975, with implications for US exports to the EEC. (Edmonton, Manning-Berg Research Associates, 1967) 78 pp.

An analysis of the economic, social, and political background factors which might influence the development of the oil seed situation in the three countries to 1976. (WAERSA 2587/1967.)

HAUREZ J
COK 702

Développement des cultures maraîchères à Kinshasa. (Development of market-gardening crops at Kinshasa.) (Paris, SEAE, 1966/République Démocratique du Congo) 64 pp.

Among the measures recommended to increase output of market-garden crops to meet an unsatisfied and growing demand, are: improved collection and processing of household refuse and sewage to remedy an acute shortage of organic matter on existing holdings; re-organisation of co-operative marketing arrangements; exploring the possibility of raising in the long run the output of nearly 2,000 small town gardens; and eventually creating an extended green belt of several hundred hectares devoted to food production and intensively manured with organic matter from the city.

9. MARKETING/CONSUMPTION

VANSINA J
COK 901

Trade and markets among the Kuba. (From "Markets in Africa", ed. BOHANAN P and DALTON G, pp 190-210, North Western University Press, Evanston, Ill., 1962.)

Market system and price structure are described, and a sample of dealings analysed.

VIS H *et al*
COK 902

Situation nutritionelle dans le Bushi et le Bukavu. (Nutrition in Bushi and Bukavu.) ("Chronique de l'IRSAC", Lwiro, Bukavu, 1967, No.1, pp 31-47.)

Descriptive analysis of nutrition and of subsistence diet in an area where population is growing by 4.3 per cent a year. The timing of cultivations and the nature and consequences of a protein deficient diet are described. Results are given of a random sample survey carried out in 1964, following a year of food shortage, in three regions inhabited by the Bashi and Bukavu tribes.

Region	I	II	III
Total calorific value of diet	86.4	112.6	105.6
of which protein	12.7	15.5	14.1
of which animal protein per cent	12.2	18.3	14.8

10. PROCESSING INDUSTRIES

LACROIX J L
COK 1001
Industrialisation au Congo: la transformation des structures économiques. (Industrialisation in the Congo: changing economic structures.) (Paris, Mouton, 1967/Institut de Recherches Economiques et Sociales, Université Lovanium de Kinshasa) 358 pp.

Mainly a discussion of optimum combination of the factors of production and of development policy in non-agricultural industries. The effects of industrialisation on inter-sectoral and international economic relationships are examined. An annexe (pp 241-294) briefly summarises the state of individual industries to 1963. Those depending on the primary sector include, for processing for export, palm oil and palm kernel oil, and, for internal consumption, food (milling, sugar refining, oils and fats, beer and soft drinks), tobacco, textiles and footwear. The author believes that nationalisation and development by the state fit in with traditional African concepts of power. Lack of administrative cadres make some kind of mixed economy necessary, however, though 'neo-colonialism' seems not to be in the best interest of the expatriate companies.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

CHANEL P
COK 1101
Probleme der eingeborenen kongolesischen Landwirtschaft. (Problems of indigenous Congolese agriculture.) ("International Afrikaforum", Munich, 1965, No.5, pp 24-28.)

Improvement of infra-structure, efficient transport and marketing, and a change of mind of Congolese officials are essential factors for an agricultural re-development programme. (WAERSA 1070/1966.)

BEGUIN H
COK 1102
Espoirs, bilan et leçons d'un 'paysannat' au Congo. (A 'peasant settlement' experiment in the Congo. Hopes, appraisal and lessons to be drawn.) ("Tiers-Monde", Paris, 1965, No.24, pp 891-913.)

A detailed analysis of mistakes made during the course of an agricultural modernisation project carried out between 1950 and 1960 in Kasai Province. (WAERSA 1667/1966.)

12. RURAL/URBAN RELATIONS

MPINGA H
COK 1201
Rôle social, économique et politique des agglomérations urbaines en République Démocratique du Congo. (The social, economic and political part played by urban growth in the Congo Democratic Republic.) Working paper No.6 for the 34th study session of INCIDI, Aix-en-Provence, September 1967, 12 pp (P).

Most town dwellers in the Congo still maintain close links with traditional rural life. Only a small minority is Europeanised. In some squatters' villages which have grown up round the larger cities a chiefly form of organisation persists, but in the towns themselves, where (except in Kasai during the secession) chiefs never acquired any influence and tribal tensions are hardly apparent, the development of autonomous municipal administration has been rather slow.

KNOOP H
COK 1202
Aspects socio-économiques de l'urbanisation au Congo. (Social and Economic aspects of urbanisation in the Congo.) Working paper No.37 for the 34th study session of INCIDI, Aix-en-Provence, September 1967, 39 pp (P).

Changes in the urban population between 1955 and 1965 are examined, to the extent that recent estimates allow. This has risen from about 11 per cent to 17.25 per cent of the total population. Of the rise some 2 per cent is attributable to natural increase. Kinshasa now represents nearly 30 per cent of the urban population, compared with 22 per cent in 1958. There is also evidence of a growing economic disparity between town and country. In 1965 Kinshasa accounted for 52 per cent of employment and 71 per cent of earnings in the province of which it is the capital, but for only 21 per cent of the population. Nevertheless, as enquiries carried out by A. SCHWARZ show, non-economic ties between town and country persist, and there is still a vigorous social intercourse between the two. Furthermore, of the workers interrogated by him at the small country town of Nioki only 23 per cent expressed a desire to migrate to Kinshasa. Although the author finds this encouraging, he expresses strong doubts about the effectiveness of present regional development policy in the Congo to counteract the overwhelming attraction of Kinshasa and Lubumbashi.

DAHOMEY 1, 2

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DU DAHOMEY, PRESIDENCE DE LA REPUBLIQUE. Plan de développement
DAH 101 économique et social, 1966-1970. (Plan for economic and social development, 1966-1970.) (Cotonou, 1966) 435 pp (P).

Section 1 of Part II (pp 47-193) deals with rural development and agriculture. Investment and output targets for 1968 and 1970 are given for each crop, and for 1970 for all types of meat.

SERREAU J Le développement à la base au Dahomey et au Sénégal.
DAH 102 (Development at the grass-roots in Dahomey and Senegal.) (Paris, Librarie Générale de Droit et de Jurisprudence, 1966) 359 pp (P).

In the author's view the village is the essential base for economic development. The extent to which this has been understood and acted upon in Dahomey and Senegal, especially as regards co-operative effort, is analysed, and planning and extension methods in both countries are compared.

REPUBLIQUE DU DAHOMEY, MINISTERE DU DEVELOPPEMENT RURAL ET DE LA
DAH 103 COOPERATION. Compte-rendu du séminaire agricole des 18-19 février 1966. (Report of proceedings of agricultural seminar held at Parakou on 18th-19th February 1966.) (Paris, IRCT, 1966) 120 pp.

Mainly a series of technical papers on the current situation in the development of cotton and food-crop production, but preceded by an important contribution on 'The social and psychological aspects of development' by the Rev. P. SOUILLAC, Director of INADES, and subsequent discussion.

2. REGIONAL STUDIES

IBRAHIM S Technique simple d'établissement des programmes agricole
DAH 201 régionaux pluriannuels au Dahomey. (A simple technique for establishing regional agricultural programmes for a period of years in Dahomey.) ("Etudes dahoméenes", Cotonou, 1965, No.4, pp 119-138.)

The problem of growth of Dahomey is shown to be that of the regions which form it. (WAERSA 1075/1966.)

ANON
DAH 202

Programme d'action régionale pour le département du Sud Ouest. (Plan for regional action in the South-West Department.) (Paris, SEDES/BDPA, 1960-1967) 12 vols. of which:

Vol.1	(339 pp)	SEDES	General report
Vol.2	(157 pp)	SEDES	Possibility of developing water supplies and agricultural production in the Lower Mono Valley
Vol.5	(141 pp)	SEDES	Supplementary study of land tenure
Vol.6	(364 pp)	SEDES	Craft industries
Vol.7	(161 pp)	BDPA	Summary report on agriculture
Vol.8	(2 vols. 314 pp)	BDPA	Social and psychological survey
Vol.9	(95 pp)	BDPA	Agricultural survey
Vol.10	(445 pp)	SEDES	Summary and concluding report.

ANON
DAH 203

Projet d'intervention dans le départment du nord-ouest. (Action programme for the North-West department.) (Paris, BDPA, 1967) 2 vols.

Vol.I (62 pp) analyses the resources of this thinly populated, generally backward region, and establishes zones for priority action. Vol.II (294 pp) details action to be taken and possible future developments in each of seven priority zones. Vol.III (57 pp) provides an inventory of the staff and financing required; estimates yields on the proposed investments; and makes a cost-benefit analysis for the economy as a whole.

ANON
DAH 204

Rapport d'exécution de l'intervention du BDPA dans le départment du nord-ouest. (Progress report on the BDPA's activity in the North-West department.) (Paris, BDPA, 1967) 73 pp.

A description of the development project's early stages. (See DAH 203.)

ANON
DAH 205

Programme de développement agricole du centre Dahomey. (Programme of agricultural development in central Dahomey.) (Paris, SATEC, 1965/République du Dahomey, Ministère du Développement Rural et de la Coopération.) 5 vols.

Vol.1 (35 pp) Summary. Vol.2 (36 pp) Technical report. Vol.3 (65 pp) Organisation and method. Vol.4 (42 pp) Note on economic aspects. Vol.5 (54 pp) Financing.

The proposals involve a massive programme of extension work and 'animation rurale', linked to the creation of supply channels and market outlets.

DE COENER
DAH 206

Développement agricole de Boukombé: propositions de modifications du programme en cours. (Proposed amendments to the current agricultural development plan for Boukombé. (Paris, SEDAGRI, 1964) 18 pp.

Progress report and reasoned amendments.

WHITE H P
DAH 207

'Terre de barre': the basis of a West African agricultural region. ("Bulletin de l'IFAN", Dakar, Jan.-Apr. 1965, 1964) 18 pp.

The name 'terre de barre' applies to a triangular-shaped region between Accra and Lagos along the coast of Ghana, Togo, Dahomey, and Nigeria. The principal agricultural problems and possible means of solving them are described. (WAERSA 2068/1966.)

4. CO-OPERATIVE FORMS OF ENTERPRISE

BARBIER C
DAH 401

L'expérience du parrainage coopératif suisse au Dahomey. (The experience of the Swiss-sponsored co-operative in Dahomey.) ("Archives Internationale de Sociologie de la Coopération", Paris, 1962, No.11, pp 163-182), reproduced from "Planification et volontariat dans les développements coopératifs" (Planning and voluntary association in co-operative developments). Proceedings of a study fortnight organised by the Co-operative College, Paris, Jan. 1962. (Paris, Mouton, 1963.)

Report on a promising international co-operative venture.

QUIRINO LANHOUMEY J
DAH 402

Le développement communautaire en Afrique noire. Leçons d'une expérience au Dahomey. (Community development in Africa South of the Sahara. Lessons from an experiment in Dahomey.) ("Politique étrangère", Paris, 1964, No.2, pp 161-180.

A discussion of three new types of agricultural organisation: co-operatives, agricultural blocks, and communal village fields. (WAERSA 3260/1964.)

VIENNEY C
DAH 403

Le mouvement coopératif au Dahomey: bilan et perspectives. (The co-operative movement in Dahomey: situation and outlook.) (Paris, Collège Coopératif, 1964) 34 pp.

There is a risk that, owing to regional differences, co-operation in Dahomey will proceed haphazardly at different paces and in different directions.

MAGNES B
DAH 404

Les champs collectifs du Dahomey. (Collective fields in Dahomey.) ("Coopération et développement", Paris, No.5, 1965, pp 44-55.)

New systems of production are considered to give unbalanced results and the causes of these failures are examined. (WAERSA 1557/1966.)

BARBOTEU G & CERINI A
DAH 405

Etude des mutuelles agricoles du centre Dahomey. (Study of agricultural credit co-operatives in central Dahomey.) (Paris, Ministère de la Coopération, 1963/ République du Dahomey.) Vol.1, 94 pp. Vol.2 (Annexes) 70 pp.

A description of the existing co-operative set-up, listing the pros and cons, is followed by recommendations on the usefulness of co-operatives in achieving structural change and technical progress. Extension of technical know-how should also involve supervised credit. At the same time existing mutual credit co-operatives form a good starting-off point for 'animation rurale' since they consist essentially of groups of persons who already trust each other.

6. LIVESTOCK PRODUCTION

TROQUEREAU P J A
DAH 601

Le développement de lélevage et le marché de la viande au Dahomey. (Development of stock-raising and of the meat market in Dahomey.) (Paris, 1961) 92 pp.

Current supply, demand, and marketing arrangements are analysed, and recommendations made for improving production and marketing. Progress in this as yet relatively unimportant sector of the agricultural economy is likely to be slow and difficult.

FROMENT D
DAH 602

Amélioration despâturages et de la production fourragère dans le sud Dahomey. (Improvement of pasture and fodder production in South Dahomey.) (Rome, FAO, 1963) 31 pp.

Problems of improving pasture management through extension services.

BORGET M
DAH 603
Production fourragère au Dahomey. Perspective pour l'avenir. (Rapport de mission, juillet 1964). (Forage production in Dahomey. Future outlook. Report on a mission, July 1964.) (Paris, IRAT, 1964) 45 pp.

Mainly a discussion of varieties and seed trials, but the wider implications for the expansion of livestock production are also considered.

BREMAUD O
DAH 604
La production de viande de boeuf en relation avec sa commercialisation. Rapport au gouvernement. (Report to the government on beef production in relation to its marketing.) (Rome, FAO, 1967) 62 pp (not released).

Data of production, trade, slaughtering, and regional levels of consumption. Recommendations for improved breeding, feeding, and disease control, as well as organisation of marketing and specialised fattening centres.

7. CROP PRODUCTION

HASLE H
DAH 701
Les cultures vivrières au Dahomey. (Food crops in Dahomey.) ("L'Agronomie tropicale", Paris, 1965, No.8, pp 725-746.)

Includes an assessment of trends in agricultural production and the improvement of production methods through co-operatives, collective farms, and communal plantations. (WAERSA 1050/1967.)

CALDERON M
DAH 702
Protection des grains en entrepôt. (Protection of grain in store.) (Rome, FAO, 1965) EPTA Report 2059, 14 pp.

Advisory visit occasioned by the expected arrival of 1,000 tons of maize under PL 480. Technical recommendations for future action and local training of experts.

KELLERMANN J
DAH 703
Développement de la production agricole dans la zone cotonnière du Nord Dahomey et plus particulièrement dans les sous-préfectures de Kandi et de Banikoara. (Developing agricultural output in the cotton-producing zone of North Dahomey and especially in the Kandi and Banikoara sub-prefectures.) (Paris, Ministère de la Coopération, 1963) 46 pp.

Technical and economic results of varietal trials with cotton and with food crops are presented, and future objectives suggested. The importance of improved extension work, especially in the form of 'animation rurale' is stressed.

ANON
DAH 704
Avant projet d'intervention dans le département du Nord-Ouest. En annexe: programme de développement de la production cotonnière au titre de l'aide à la diversification des cultures. (Preliminary action programme in the North-West department. Annexe: development programme for cotton production as a means of encouraging crop diversification.) (Paris, BDPA, 1966) 66 pp.

Contains an estimate of output attainable annually to 1970.

ANON
DAH 705
Etude des conditions de développement de la culture du palmier à huile au Dahomey. Conclusions et propositions présentées par l'Institut de Recherche sur les Huiles et Oléagineux. (Study of conditions for developing the planting of oil palms in Dahomey. Conclusions and proposals submitted by the Research Institute for Oils and Oilseeds.) (Paris, IRHO, 1964) 18 pp.

An assessment of the volume of palm oil required to keep existing extraction plants at an economic level of production and the means for increasing output in order to make good the present shortfall in supply. A ten-year programme to 1974 is outlined.

DESBUQUOIS
DAH 706
Notes sur le palmier à huile au Dahomey. (Notes on oil palms in Dahomey) and Note complémentaire: données nouvelles et effectives du problème (Supplementary note: new factual data concerning the problem). (Paris, CCCE, 1967/1968) 31 pp and 13 pp.

The first study considers, from a purely theoretical standpoint, both the scope for depreciation and the possible return to producers of investments in palm plantations, given conditions of low rainfall and comparatively poor yields. The effect of the palm planting plan on the economy as a whole is also examined. In the second study the author's conclusions are modified in the light of actual experience.

DELORME M
DAH 707
Le cocotier au Dahomey. (The coconut palm in Dahomey.) ("Oléagineux", Paris, 1966, No.21, pp 1-4.)

Improved application of fertilisers could increase annual copra production in Dahomey to 14,000 tons in ten years. (WAERSA 2867/1966.)

9. MARKETING/CONSUMPTION

ANON
DAH 901
Le marché dahoméen. (Marketing in Dahomey.) ("Marchés tropicaux et méditerranéens", Paris, No.1046, 27 Nov. 1965, pp 2973-3044.)

A general survey of markets in Dahomey.

PUECHEVY, SERVANT & MONTENEZ
DAH 902
Etudes des circuits commerciaux des produits et biens essentiels au Dahomey. (Study of the market for certain products and necessities in Dahomey.) (Paris, SEDES, 1964) 5 vols.

Vol.1 (288 pp) Food products: situation analysed. Vol.2 (134 pp) Food products: proposals for reform. Vol.3 (315 pp) Imported goods. Vol.4 (132 pp) Additional survey of a number of export products. Vol.5 (79 pp) Summary.

A market survey covering the following commodities: (a) domestic food products: maize, garri, palm oil, yams, sorghum, tomatoes, beans, onions, poultry; (b) imported goods: food products: wheat flour, sugar, salt, rice, beer, tomato concentrate, sardines; household goods: cigarettes, enamel goods, textile piece goods, paraffin, shoes; building materials: cement, steel sheets, reinforcing rods; (c) export crops: palm products, coconut products, cotton, groundnuts, tobacco.

A number of recommendations are made for the improvement of marketing channels of the more important commodities.

BREMAUD O
DAH 903
La production de viande de boeuf en relation avec sa commercialisation. Rapport au gouvernement. (Report to the government on beef production in relation to its marketing.) (Rome, FAO, 1967.)

For summary see DAH 604.

DAHOMEY, MINISTERE DES AFFAIRES ECONOMIQUES ET DU PLAN.
DAH 904
Programme de l'enquête sur les budgets et la consommation alimentaire des ménages 1965-66. (Programme for household food budget enquiry 1965-66.) (Cotonou, 1966).

Statistical directions for the enquiry.

CRESTA M
DAH 905
Besoins et niveaux de consommation alimentaire de la population. Rapport au gouvernement. (Food requirements and levels of consumption of the population. Report to the government.) (Rome, FAO, 1967) 57 pp.

Nutritional study based on a food survey of 380 households carried out in south-east Dahomey (Ouemé department). As part of the general conclusion estimates of total and per capita demand in 1981 are given for maize, wheat, husked rice, dried beans, fresh tomatoes, fish, and meat.

TERRA G J A
DAH 906
Amélioration de la nutrition par le création de jardins familiaux. Rapport intérimaire. (Improving nutrition through making family gardens. Interim report.) (Rome, FAO, 1967) (restricted).

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

COTTIN H & MERUSI L
DAH 1101
Animation et développement rural au Borgou. (Rural quickening and development in Borgou.) (Paris, PROHUZA, 1968) 112 pp.

A social and economic study of the North-Eastern department. The principles of 'animation rurale' on which rural and agricultural development should be based are enunciated.

12. RURAL/URBAN RELATIONS

COSTA E
DAH 1201
Back to the land: the campaign against unemployment in Dahomey. ("International Labour Review", Geneva, Jan.1966, pp 29-49) (also in French edition).

In 1964 the estimated total of unemployed in Cotonou and Porto Nuovo was 35,000, about 20 per cent. In the 15 to 19 age-group the proportion in many towns rises to 50 per cent. Prospects for industrialisation in Dahomey are particularly unfavourable. A number of communal schemes designed to relieve urban unemployment by means of agricultural resettlement are critically examined.

GLELE M A
DAH 1202
Le fait urbain au Dahomey. (The urban situation in Dahomey.) (Working document No.30 for the 34th study session of INCIDI, Aix-en-Provence, September 1967) 23 pp (P).

Economic and political implications of swollen urban populations in a country relying for its economic growth almost wholly on agriculture are described. The literate become under-employed bureaucrats; the illiterate remain largely unemployed.

ETHIOPIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

HUFFNAGEL H P
ETH 101
Agriculture in Ethiopia. (Rome, FAO, 1961) 465 pp (P).

A comprehensive description of background, structure, and practice.

ATKINS W S & Partners
ETH 102
Invest in Ethiopia. (Epsom, 1964) 115 pp (P).

A general descriptive handbook of the economy.

TROUVE C
ETH 103
Note d'information générale sur l'agriculture éthiopienne et les orientations du Deuxième Plan. (General information on Ethiopian agriculture and on the main directions of the Second Plan.) (Paris, BCEOM, undates) 23 pp and annexes.

Descriptive analysis derived from the documents of the Second (1962-1967) Plan, giving a general picture of production, marketing, and structure.

GRYZIEWICZ S
ETH 104
Main determinants of Ethiopian economic development. ("Ethiopian Observer", Addis Ababa, 1964, No.3, pp 192-201.)

Only the growth of agricultural production can give momentum to wider developments and to the growth of industry, including agricultural processing industries. The expansion of exports of raw and processed farm products is a necessary condition for economic development. (WAERSA 2127/1966.)

DIEBOLD P B et al
ETH 105
Report of the exploratory mission to Ethiopia in connection with a possible agricultural economic survey, 29th April-2nd June, 1965. (Rome, FAO, 1965) 81 pp.

Includes recommendations on surveys to be made of land and water resources and of agricultural structure; also on a wide variety of aspects of Ethiopian agriculture, including crop and livestock production, agrarian reform, and marketing, as well as on planning and investment policies.

GUEROULT B
ETH 106
Notes de Mission FAO-BIRD en Ethiopie, nov-déc.1965. (Notes on a FAO-IBRD mission to Ethiopia, Nov.-Dec. 1965.) (Paris, BDPA, 1966) 45 pp.

Part I gives the main national agricultural production and trade statistics. Part II details estimated production and yields of cereals, oilseeds, pulses, and cotton, with comments on particular aspects of rotations and ecology. Part III considers the means of raising cash incomes of Ethiopian smallholders, and the possible part to be played by agricultural credit. Attention is drawn to the need for better storage and marketing arrangements; better yields through improved seeds, cultivations, and equipment; higher fertility by means of improved rotations, wider use of fertilisers, and anti-erosion measures; better roads and the use of carts, which are non-existent; changes in land tenure, making it possible for tenants to retain marginal income for their own use; and improved extension services.

HELMSCHROTT H
ETH 107
Entwicklung und Entwicklungspolitik in Ostafrika: Äthiopien. (Development and development policy in East Africa: Ethiopia.) (Munich, Ifo-Institut für Wirtschaftsforschung, 1965/Bundesministerium für wirtschaftliche Zusammenarbeit.) 96 pp and Tables.

One of a series of studies carried out for the Federal Ministry for Economic Co-operation to assess critically the general pattern of development planning in each country; to describe the nature and scope of current multilateral and bilateral assistance; and to propose the most desirable forms and method of organising aid in the future. The study begins with a brief description of the country's economic structure.

2. REGIONAL STUDIES

IMPERIAL ETHIOPIAN GOVERNMENT, CENTRAL STATISTICAL OFFICE. Report on a
ETH 201
survey of Arussi Province (Addis Ababa, 1966) 27 pp.

The survey, part of a national sample survey started in 1963, was carried out in May-June 1965. Methodology is described. The survey covers demography; literacy; occupation; size of household; size of holding and fragmentation; crop areas; mode of tenure and of rent payment; general type of farming (settled cultivation/settled grazing/ semi-nomadic); and livestock numbers. The latter were found to be much under-estimated by farmers.

ANON Project Preparation Team Report for joint Swedish-Ethiopian
ETH 202 Study of Chilalo area of Arussi province (Addis Ababa, SIDA).

Report No.I (Oct. 1966) 406 pp. Part I describes the general background area. Part II outlines projects for land reform, infrastructure and afforestation. Report No.II (May 1967) approx. 200 pp (misc. pagination). This report makes further recommendations on agriculture, infrastructure, education, trade and industry, and forestry.

RUAIS P *et al* Mission préliminaire à l'étude de l'aménagement du
ETH 203 Bassin du Wabi Shebelli. (Preliminary investigation for a development study of the Wabi Shebelli basin.) (Paris, BCEOM/ORSTOM/BDPA, 1966.)

Vol.1 (38 pp) contains basic data. Vol.2 (75 pp) sets out a programme for future studies on physical and human environment, the general economy, and regional and other special surveys. Vol.3 (40 pp) estimates the ways and means. Vol.4 (17 pp) summarises the proposals. Vol.5 (42 pp) contains general information on Ethiopian agriculture and a sociological and economic description of the Lower Wabi Shebelli Valley.

RUSSELL T P J *et al* Report of the Oxford University Edpedition to the
ETH 204 Gamu Highlands, 1968 (Oxford, School of Geography, 1969) 112 pp.

Report by the four members of an expedition which spent nine weeks in a region of the Gemu-Gofa province of southern Ethiopia between July and September 1968. A brief introductory description of the geography, history, population, and intensive agriculture of this densely populated region is followed by two localised case studies of the agricultural economy of Chento and Hollo halakates. The last part of the report consists of a study of market organisation and market flows in the region, with particular reference to Chencha, Dorsé, and Otschollo markets. The report notes the influence on the economic development of the region of a thriving craft-weaving industry and of emigration to, and emigrants' remittances from, Addis Ababa, for both of which the Dorsé tribe are mainly responsible.

3. LAND TENURE

MASSART E Appunti di diritto agrario etiopico. (Concepts of Ethiopian
ETH 301 agricultural law.) ("Rivista di diritto agrario", Milan, 1963, No.1/2, pp 159-174.)

Considers especially questions of land tenure, agricultural communities, and associations of land owners. (WAERSA 132/1964.)

MANN H S Land tenure in Chore (Shoa): a pilot study. (Addis Ababa,
ETH 302 Institute of Ethiopian Studies and Oxford University Press, 1965). Monographs on Ethiopian land tenure No.2, 78 pp (P).

The study was organised in order to develop a suitable methodology for field investigation into landlord-tenant relationships and systems of land tenure in Ethiopia. Objective studies of this kind in different parts of the country are needed to provide a basis for policy-making in the field of agricultural development. The present study, based on a random sample of 83 landlords and 102 tenants, includes an examination of systems of tenure, size and fragmentation of landlords' and tenants' holdings, extent of absentee ownership, nature of tenancy agreements, relative contribution of landlords and tenants to farming expenses and to land taxes, extent of share-cropping and cash tenancies, services rendered by tenants to landlords, and tenants' indebtedness.

GETACHEW A
ETH 303

Land reform in Ethiopia. (Addis Ababa, Ministry of Land Reform and Administration, 1967) 25 pp.

An outline of problems of land tenure and structure in Ethiopia; a critical assessment of legal and fiscal reforms attempted so far; and recommendations for future action to remove some of the basic obstacles to growth in the agricultural sector.

4. CO-OPERATIVE FORMS OF ENTERPRISE

KIDANE M Z
ETH 401

Le rôle des coopératives pour moderniser l'agriculture éthiopienne. (The role of co-operatives in modernising Ethiopian agriculture.) (Lugano, Arti Grafiche Gaggini-Bizzozero, 1961) 192 pp (P).

Agrarian structure in Ethiopia and steps taken to change it are described, including the development of the co-operative movement in production and marketing. The role and aims of co-operatives are discussed mainly from a theoretical standpoint.

6. LIVESTOCK PRODUCTION

ANON
ETH 601

The cattle and meat industry in Ethiopia. ("National Bank of Ethiopia Quarterly Bulletin", Addis Ababa, 1964, No.21, pp 1-12.)

The study is based on an FAO report and on information provided by the Ministry of Agriculture and by Ethiopia's five meat factories. The throughput of these is the only reliable basis for estimation of export and of internal demand, which at around 20 kg. per head is one of the highest in tropical Africa. Estimates of the total cattle population, for which there is little statistical evidence, range from 20 to 25 million, of which some 5 million are probably draft animals. The activities of the meat factories are briefly described, and the importance is stressed of improving veterinary services, grazing methods, and internal transport. Meat production is at present mainly at subsistence level, Ethiopian peasant agriculture being traditionally mixed, but there is a large potential market, taking both urban and export demand into consideration. Ethiopia enjoys a relative price advantage in the export of livestock products both in comparison with its potential competing neighbours and in importing countries.

7. CROP PRODUCTION

SCHUMACHER G
ETH 701

Der Kafeeanbau in Athiopien. (Coffee cultivation in Ethiopia.) (Fribourg, 1963) 128 pp. (Dissertation.)

Includes an examination of the local organisation and commercial aspects. (WAERSA 1514/1965.)

ANON
ETH 702

Production and processing of oilseeds in Ethiopia. ("Quarterly Bulletin of the National Bank of Ethiopia", Addis Ababa, 1966, No.10, pp 1-17.)

Includes data of production, consumption, and exports of major oil crops 1960/61 to 1964. (WAERSA 1991/1967.)

9. MARKETING AND CONSUMPTION

BOYENS R W
ETH 901
Marketing of livestock and meat in Ethiopia. (Rome, FAO, 1964) EPTA Report No.1868, 37 pp.

Description, and recommendations for improvement.

MESSLING S D
ETH 902
The Abyssinian market town. (In "Markets in Africa", ed. BOHANAN P and DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 386-508 (P).)

The marketing system and market organisation at Gondar in Amhara province provides an illustration of the market economy in Ethiopia in relation to other aspects of Ethiopian society.

KLUCKHORN R
ETH 903
The Kouso economy of Southern Ethiopia. (In "Markets in Africa", ed. BOHANAN P and DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 409-428 (P).)

A study of a people noteworthy for the volume of their external trade and advanced agricultural techniques.

DE YOUNG M
ETH 904
The internal marketing of agricultural products and its influence on agricultural productivity and income. ("Ethiopian Observer", Addis Ababa, 1967, No.1, pp 16-35.)

The location of market sites in the internal marketing system is described. In the absence of historical or current statistics for any of them, the author's conclusions are based mainly on the results of fairly detailed observations made over the previous year in Addis Markato. There is evidence of misallocation of resources, of a number of factors discouraging increases in production, of lack of standardisation or grading (which also inhibits the opening up of potential export markets). For some agricultural commodities, however, market conditions have been encouraging to specialisation, and productivity of these has been favourably influenced. Since merchants have tended to concentrate their efforts in urban markets, rural markets have not developed and country people have been relatively little exposed to the attraction of consumer goods. The marginal utility of legal money therefore remains very low in rural areas, encouraging the use of cattle as currency, with unfortunate results on livestock production. Urban orientated marketing of grains, pulses and oilseeds has also combined with poor on-farm storage facilities to create speculative opportunities for traders and tie up a large proportion of available investment funds. Prices are affected adversely both for the rural producer and the urban industrial worker. The author suggests four priorities for remedial action: a greater variety of merchandise to be offered to rural consumers; more and better storage; improved farm credit; and better grading and standardisation of produce.

WICKSTROM B
ETH 905
Sagure, a market village in Ethiopia. (Addis Ababa, Swedish Regional Development Project, 1967) 36 pp.

A market study in Chilalo auraja, made between November 1966 and November 1967. Amounts and frequency of purchases of consumer goods, and origins of the purchasers, are analysed both in the general stores and in the open market-place.

LEANDER L
ETH 906
Grain marketing experiment in Arussi, 1967. (Addis Ababa, Swedish Regional Development Project, 1967) 32 pp.

An investigation of market conditions in the Chilalo auraja. Results of a pilot scheme of small-scale grain purchases by the newly-created Ethiopian Grain Corporation to test possible effects of future intervention by the Corporation on Ethiopian markets with a view to reducing wholesalers' margins. Producers' reactions, grain quality, and fraudulent weighing by dealers, are described, and seasonal price fluctuations for various grains and seeds analysed.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

MILLER L F & MARKONNEN T Organisation and operation of three Ethiopian case farms. ("Bulletin of the Experimental Station of Oklahoma State University", Stillwater, 1965, No.35) 42 pp.
ETH 1101

Lack of education, credit, and elementary community facilities result in low output and incomes, but until there is a major increase in the amount of farm land and other resources available to them, the potential income and consumption level of the families investigated remains low. (WAERSA 1858/1965.)

12. RURAL/URBAN RELATIONS

WOLDE-MARIAM M The rural-urban split in Ethiopia. Working paper No. 20 for the 34th study session of INCIDI, Aix-en-Provence, September 1967, 12 pp (P).
ETH 1201

The widening economic gap between town and country is described. Demographic data illustrate both the much higher proportion of males to females in the country areas as well as the greater preponderance there of the younger and older age-groups of the population. Available statistics also indicate a vast difference in the literacy rate: about 4 per cent in the country compared with 36 per cent in the towns. The author suggests that university graduates and the military could be enlisted in the task of rural development. They could establish mental and physical communication with a population largely cut off from contact with the towns by the corrugated nature of Ethiopia's relief.

GABON 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE GABONAISE. Plan de développement économique et social 1966-1970. (Plan for Economic and Social Development 1966-1970.) Paris, COGIPA, 1966) 566 pp (P).
GAB 101

Of the Rural Development section (pp 139-229) the first 15 pages are devoted to fishing. Estimates are then made of current crop and livestock production. General policy objectives are stated, but no quantitative output targets are given for individual products. In the livestock sector there are proposals for new veterinary and cattle-breeding centres, and experimental poultry and cattle-raising units. In crop production there are special schemes for rice, market-gardening, and palms. Four regional development schemes aim at increasing export crops and/or food supplies for the industrial working population. The annual investment cost of each proposal is estimated.

CENTRE D'INFORMATION ET DE DOCUMENTATION GABONAIS. Le Plan de développement économique et social du Gabon 1966-1970 - texte résumé. (Gabon Plan for Economic and Social Development 1966-1970 - summary edition.) ("Actualités Gabonaises", Libreville, Nos.6/7, 1966.) 116 pp (P).
GAB 102

A useful digest of the Plan. In the agricultural section (pp 23-24) the four regional development schemes receive relatively extensive treatment (3 pp).

NEHOFF H O Gabun - Geschichte, Struktur und Probleme der Ausfuhrwirtschaft eines Entwicklungslandes. (Gabon, history, structure, and problems of the export economy of a developing country.)
GAB 103

(Berlin, Springer Verlag, 1967/Munich, Ifo-Institut für Wirtschaftsforschung) Afrika Studien No.16, 372 pp.

Includes a detailed consideration of the economic aspects of cocoa, coffee, and oil palm cultivation. (Tropical Abstracts r640/1968.)

2. REGIONAL STUDIES

REPUBLIQUE GABONAISE: MINISTERE DE L'ECONOMIE NATIONAL, DU PLAN ET
GAB 201 DES MINES. Etude des structures zonales du développement rural. (Study of the structure of rural development in the regions.) (Paris, BDPA/SEDES, 1964) 18 vols. and atlas.

General study: a) Summary report (103 pp); b) General outline of an agricultural policy for Gabon: outline for 1975 (123 pp); c) Assessment of its economic effects (222 pp). Regional studies: d) Woleu-N'Tem and Ogooue Ivindo; e) Upper Ogooué; f) The Estuary, Central Ogooué, Coastal Ogooué, N'Goumié, and Nyanga; g) to n2) Special projects; o), p), q) Preliminary memoranda for projects.

A study embracing a number of major regional projects, and projects for specific products, such as fruit and vegetables, and cattle, for certain areas.

REPUBLIQUE GABONAISE: MINISTERE DE L'AGRICULTURE, ELEVAGE ET ECONOMIE
GAB 202 RURALE. Resultats préliminaires de l'enquête agricole au Woleu N'Tem, année 1966. (Preliminary findings of the agricultural survey in Woleu N'Tem carried out in 1966.) (Libreville) 75 pp.

The methodology of the survey is described. The enquiry covered cocoa planting and disease, livestock numbers, and implements. An Appendix contains an interesting summary of the history of the region from 1880 to 1955 from information provided by a local notable.

ANON
GAB 203 Etude de la région économique de N'Gounié-Nyanga. (Study of the N'Gounié-Nyanga economic region.) (Paris, BDPA, 1964/République du Gabon, Ministère de l'Economie Nationale.) 141 pp.

An inventory of the region's resources, and proposals for their development. Poor road communications are one of the main obstacles to organising a market economy.

BONNEFORD J Etude de l'Estuaire, de l'Ogooué Maritime et du Moyen-Ogooué.
GAB 204 (Study of the Estuary, Maritime Ogooué and Central Ogooué.) (Paris, BDPA, 1965/République du Gabon, Ministère de l'Economie Nationale.) 91 pp.

An inventory of the regions' resources and proposals for their development. The importance of forestry has resulted in the neglect of agriculture, and high urban wages have been a further disincentive to rural development.

6. LIVESTOCK PRODUCTION

RICOU P & CHARBONNIER J Etude des possibilités de l'élevage au Gabon.
GAB 601 (The outlook for cattle-raising in Gabon.) (Paris, Ministère de la Coopération, 1964) 184 pp.

An analysis of demand (projected to 1980), and current supply of beef. Proposals for expanding production favour the family farm (supplied with stock of appropriate breed through government cattle-breeding centres) rather than the ranch. Despite its economic attraction and the more rapid increase in supplies which it could bring about, large-scale production would be subject to considerable managemental and geographical constrictions.

7. CROP PRODUCTION

GABON, MINISTERE DE L'AGRICULTURE, ELEVAGE ET ECONOMIE RURALE. Projet de développement rural axé sur les cultures maraîchaires et fruitières dans la région de Medouneu. (Rural development plan based on market-garden and fruit crops in the Medouneu region.) (Libreville, 1966) 133 pp.
GAB 701

Supply and demand and market situation are described and proposals made for setting up a technical aid centre (Centre d'Appui Technique) to improve production and marketing. Effects on farm incomes and on the national economy are estimated.

SOITOUT M — Le Gabon et les cultures légumières. (Vegetable growing in Gabon.) ("L'Agronomie tropicale", Paris, 1967, No.1, pp 66-69.)
GAB 702

Mainly a technical study, with a brief note on market outlets, which are at present limited.

9. MARKETING/CONSUMPTION

ANON — Le marché gabonais. (Markets in Gabon.) ("Marchés tropicaux et méditerranéens", Paris, No.1202, 23 Nov. 1968) 80 pp (available in English).
GAB 901

A general survey of marketing.

REPUBLIQUE GABONAISE: MINISTERE DE L'ECONOMIE NATIONALE DU PLAN ET DES MINES: SERVICE DE LA STATISTIQUE ET DES ETUDES ECONOMIQUES. Note sur l'enquête 'conditions de vie en milieu africain' effectuée à Libreville en 1961-1962. (Notes on an enquiry into African living standards carried out in Libreville in 1961-1962.) (Libreville, 1964) 19 pp.
GAB 902

Findings of a household budget survey in the Libreville urban district.

REPUBLIQUE GABONAISE:SERVICE NATIONAL DE LA STATISTIQUE. Enquêtes sur les conditions de vie des population des régions de la N'Gounié et du Woleu N'Tem décembre 1962-janvier 1964. (Surveys into the standard of living of the population in the N'Gounié and Woleu N'Tem regions, December 1962-January 1964.) (Libreville, 1964) 20 pp and Tables.
GAB 903

The surveys covered nutrition and household consumption, as well as providing demographic information.

10. PROCESSING INDUSTRIES

ANON — Rapport au gouvernement du Gabon sur les possibilités de développement des industries alimentaires au Gabon. (Report to the Gabon government on the possibility of developing food industries in Gabon.) (Rome, FAO, 1968.)
GAB 1001

Part I considers the economic factors, including the deterioration in the quality of cocoa produced. Part II describes the at present very small industry. Part III makes recommendations for its future development, as well as on price and quality control. (Tropical Abstracts s31/1969.)

12. RURAL/URBAN RELATIONS

BIFFOT L
GAB 1201
Evolution du monde rural nord-est au Gabon en relation avec les changements en agriculture. (Developments in the countryside in north-east Gabon in relation to changes in agriculture.) (Paris, ORSTOM, 1964) 22 pp.

A survey of village life and of the influences operating against any break-out from subsistence agriculture. Cropping on a sample of 499 parcels of land in 5 districts is analysed. Areas under cultivation are seen as a function of the marketing outlets in each district, especially of those provided by roads. The aeroplane provides no initial solution.

BIFFOT L
GAB 1202
Facteurs d'intégration et de désintégration du travailleur gabonais à son entreprise. (Factors affecting the Gabonese worker's sense of identification or of lack of identification with the firm he works for.) ("Cahiers de l'ORSTOM", Série Sciences Humaines, No.1, 1963) 133 pp (P).

Results of a survey among skilled and semi-skilled wage-earners.

GAMBIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

ANON
GAM 101
The Gambia. The Gambia Government Development Programme 1967/68-1970/71. (Bathurst, Government Printer, 1967) Sessional Paper No.4, 34 pp (P).

The desirability of Senegalo-Gambian association is stated, but difficulties arising from the two countries' trade policies are pointed out. Development between 1964 and 1967 is described, and scope for future growth discussed. Projects are listed and costed. The programme is basically in harmony with the Senegalese Four-Year Plan.

ANON
GAM 102
The Gambia. British financial aid to the Gambia, 1967/68 to 1970/71, and a study of the economy of the Gambia. Extracts from the report of a mission from the British Ministry of Overseas Development, 1965, with observations of the Government of the Gambia. (Bathurst, Government Printer, 1967) Sessional Paper No.7, 21 pp (P).

Agriculture is dealt with on pp 6-11, with groundnuts, rice, oxenisation, and agricultural experimental stations dealt with in separate sections. The need for co-operation with Senegal is especially stressed. Possibility of eventual association with the EEC is considered. The substantial advantages of preference for its agricultural products at present enjoyed by Senegal in the Common Market is contrasted with the high tariffs on imports into that country which raise the cost of living there, compared with small or nil tariffs imposed in Gambia.

DE MEREDIEU J & AUBRAC R
GAM 103
Integrated agricultural development in the Gambia River Basin. Report to the governments of Gambia and Senegal. (Rome, FAO, 1964) 61 pp.

Most of the river Gambia's middle course is in Senegal and its large estuary occupies practically the whole of Gambia. The political frontier has inhibited the development of river transport, cutting off the estuary from its hinterland and the Casamance province from the rest of Senegal. After describing the physical features, population, and agricultural resources of the river basin, the report gives income estimates, and particulars of foreign trade, groundnut production, and marketing mechanisms of each country. Transport as an important cost element is considered. The second part of the report discusses the long-term and short-term development potential of the river basin, and makes recommendations for further more detailed studies, including appropriate pilot projects, in both fields. The main long-term possibilities concern building of storage dams on the upper reaches to control flooding and provide water for the dry season, irrigate 100,000 acres in the middle reaches, protect 160,000 acres in the estuary from salt-water intrusion, improve another 160,000 acres, and supply hydro-electric power. Many of the short-term measures recommended would benefit from co-operation between the two countries: intervention on the key groundnut market, diversification into other crops (including rice, though any large-scale development must await the comprehensive hydraulic works), encouragement of fertiliser use, improvement of veterinary services and livestock marketing, expanding fisheries in Gambia, and overhauling the structure of the transport system.

BIGGS H C Two reports on visits to the Gambia, June 1965 and January
GAM 104 1966. (London, Ministry of Overseas Development) 13 pp and 23 pp.

The first report makes a general appraisal of the agrarian economy in the light of the proposed programme of diversification of agricultural production, and of marketing possibilities. Priority should be given to groundnuts for oil, rice, confectionery groundnuts, oil palms, cotton, tobacco, fruit and vegetables, cattle, and possible benniseed and cassava if outlets for these proved promising.

The second report describes a folow-up visit in which production, processing, and marketing of a number of agricultural products were examined in greater detail and on the ground: rice, limes, cattle, oil palms, and cotton. The need for government intervention is considered, particularly in the field of marketing through statutory boards or similar organisations. The report concludes that some element of central direction should be introduced, but the temptation to do too much too quickly and in respect of too many commodities at once should be resisted. Priority should be given to rice, cattle and beef, lime products, and oil palms, preferably within the organisational and financial framework of the Gambia Oil Seeds Marketing Board.

3. LAND TENURE

NOBLE B P Mémoire sur quelques aspects du régime foncier au Sénégal,
GAM 301 en Angleterre, et en Gambie. (Note on some aspects of land tenure in Senegal, England and Gambia.) (In "Annales Africains, 1965", University of Dakar, Paris, Pedone, 1965, pp 229-250.)

For summary see SEN 203.

7. CROP PRODUCTION

PEACOCK J M et al Report of the Gambia ox-ploughing survey, 1966.
GAM 701 (London University, Wye College Exploration Society, 1967) 18 pp and Appendices.

The object of the survey was to compare the productivity of the agriculture practised by farmers who had attended a Mixed Farming Centre with that of traditional handcultivating farmers. The unit of comparison was the compound. Methodology for sampling and calculating results is described and limitations (mainly of mensuration) of the results indicated. Trainees' total output was found to be higher; they cultivated more land; their yields were slightly higher; and they had more land under food crops. They enjoyed a higher standard of living in terms of farm animals and consumer durables possessed. Oxenised compounds belonging to non-trainees reaped similar benefits but to a lesser degree. Contractees (whose compounds were cultivated by animal traction under contract) were only slightly better off than handworkers since they tended to have more land cultivated than they could efficiently cope with. The report rejects mechanisation. It points to the shortcomings of the extension services, which are vital to the success of oxenisation, and to the sometimes poor standards of instruction at the Mixed Farming Centres.

TARENSKEEN D W Land reclamation to increase rice production in the
GAM 702 Gambia. (Wageningen, 1965/Netherlands Office for International Technical Assistance, The Hague) 15 pp.

The Gambia imports 9-10,000 tons of rice a year. Potentially suitable land for transplanted rice in the fertile tidal swamps near the mangrove-edge of the Gambia River offer possibilities for helping to make the country at least self-sufficient. The report gives conclusions of a preliminary survey of the steps required to improve accessibility of the swamps by the construction of bridges and causeways capable of carrying ox-carts and light motorised vehicles. It includes recommendations on the protection and re-planting of rhunpalm as a source of suitable timber for piles, as well as on the training of village labour in building skills.

9. MARKETING/CONSUMPTION

NASTA V Rice marketing in Gambia. (Rome, FAO, 1964) ETPA Report
GAM 901 No.1910, 23 pp.

An analysis of consumption, production and prices.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

HASWELL Margaret The changing pattern of economic activity in a Gambia
GAM 1101 village. (London, HMSO, 1963/Department of Technical Co-operation) 109 pp.

Report of a re-survey carried out in January and February 1962 of the village of Genieri, 110 miles upstream from Bathurst on the south bank of the Gambia. It analyses changes in social structure and physical lay-out, which had occurred mainly under the impact of external events, since the author's three-year field investigation of 1947-50, results of which were published in "Economics of agriculture in a savannah village" (London, HMSO/Colonial Office, 1953, 142 pp). Although their income position remained precarious the inhabitants had, thanks to the growth of a market outlet for groundnuts, to improved communications, and to the availibility of incentive goods, moved out of a subsistence economy. Attraction of wage employment elsewhere and the breakdown of extended families into smaller family units has led to the virtual disappearance of male labour for clearing food-farms by axe and fire. This has resulted in a change in the staple grain from millet to rice, whose cultivation in the tidal river swamps has traditionally been woman's work. Rice having acquired an increased status as a commodity currency, women are now emancipated to the extent that they actively participate in the money economy in the local market. The dietetic implications of this changeover, involving both advantages and risks to health in the village, are discussed. Though hygiene is improving there is still a high level of infant mortality. Genieri cultivators have not yet attained a level of productivity at which they are willing to spare grain for livestock feed. They have, however, reached the earlier stage of development in which patterns of expenditure are concentrated on improved housing and clothing, the services of village craftsmen, and traders' goods. Until the growing of transplanted rice, given the technical assistance of access causeways to the swamps, is seen to afford measurably improved productivity per unit of labour, men will not be attracted to engage in its production for the market, and women will continue to bear the brunt of the work, performing tasks which in Asia are undertaken by oxen. Although the motive for increasing output is established, the means lag behind. The limiting factors are both technical and economic, of which the most inhibiting to growth is the lack of assured markets at remunerative prices.

GHANA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIC OF GHANA. 1963/64-1969/70 Seven-year Development Plan. (Accra,
GHA 101 Planning Commission, 1964) 305 pp (P).

The section on agriculture (pp 53-88) elaborates the main tasks of raising nutritional standards, increasing rural incomes, and stepping up the output of agricultural raw materials for both export and for domestic processing industries.

BISSU I Ghana's seven-year development plan in retrospect. ("The
GHA 102 Economic Bulletin of Ghana", Accra, No.1, 1967, pp 21-44.)

A detailed critical discussion of the 1963/64-1969/70 Plan under which agricultural production was expected to rise by 38 per cent, with a fall of 10 per cent in the farm population. (WAERSA 1041/1968.)

AMIN S Trois expériences africaines de développement, le Mali,
GHA 103 la Guinée et le Ghana. (Three African experiments in development, Mali, Guinea, and Ghana.) (Paris, PUF, 1965) 235 pp (P).

For summary see GUI 101

NICHOLSON S A The economy of Ghana, with special reference to govern-
GHA 104 ment strategy for economic development. (Duke University, Durham, N.C., 1965) 206 pp.

A critical examination of planning in Ghana, with special reference to agriculture. (Dissertation Abstracts, Ann Arbor, Michigan, 26, 2, 745, 1965) (WAERSA 23/1966.)

STOCES F Agricultural production in Ghana, 1955-1965. (Accra, Uni-
GHA 105 versity of Ghana, 1966) 44 pp.

The potential demand for food, based on 1961 per head consumption, has increased by about G£ 19.5 mn. (at 1960 constant prices) in the five years up to 1965, but supply has decreased by G£ 17.2 mn., so that food supply would have to rise by about 23.5 per cent to catch up with present demand. This is the main cause for inflationary pressure since 1965, which has been accentuated by falling imports of staple foods. It will continue until food production is increased annually by up to 10 per cent over 4 or 5 years. Higher output per man, through the introduction of new types of large-scale production, must be supported by credit facilities and a strengthened advisory service. Improvements must also be made in marketing, especially transport. (WAERSA 192/1967.)

BIRMINGHAM W & FORD A G (Editors). Planning and growth in rich and poor
GHA 106 countries. (London, Allen & Unwin, 1966) 267 pp (P).

Studies of the theory of economic growth integrated with an examination of the economies of the UK, India, Ghana, and Sierra Leone. (WAERSA 2/1967.)

ORD W H *et al* Ghana: projected level of demand, supply and imports of
GHA 107 agricultural products in 1965, 1970 and 1975. (Washington D.C., United Stated Department of Agriculture Economic Research Service, 1964) 120 pp.

The main aim of this study was to examine the major determinants of change in the level of demand for agricultural products currently imported into Ghana and to estimate how far the demand for, and supply of, these selected products may develop by 1965, 1970 and 1975. Special attention is given to wheat flour, rice, sugar, milk products, meat, and fish, which have accounted for some 85 per cent of food imports in recent years. In chapter (I) population projections are developed under various assumptions; (II) detailed consideration is made of GDP and changes in *per caput* income over 1950-61; (III) Ghana's dependence on external trade and capital imports is examined; (IV) probable lines of development are established along which aggregate output and *per caput* income may develop over 1960-75; (V) micro-economic aspects are examined, starting with an appraisal of cross-section data on relationships between household food consumption and total expenditure; (VI) income/consumption relationships derived from time-series data on food imports are used to project consumers' demand for total food and for selected items (i.e., at constant prices and allowing only for changes in income and total population); and (VII) the Ghana market for selected imported commodities is examined with reference to the extent to which import substitution and balance-of-payments considerations may affect their future prospects. (WAERSA 3391/1966.)

WILLS J B (editor) Agriculture and land use in Ghana. (London/Accra,
GHA 108 Oxford University Press for the Ghana Ministry of Food and Agriculture, 1962) 504 pp (P).

A comprehensive descriptive survey. Agricultural economic aspects are mainly confined to pp 173-225; Chapter 12, Communications and Transport (WHITE H P); Chapter 13, Main Principles of Rural Land Tenure (POGUCKI R J H); Chapter 14, Agriculture and the General Pattern of Land Use (WILLS J B).

MANSHARD W Die geographischen Grundlagen der Wirtschaft Ghanas unter
GHA 109 besonderer Berücksichtigung der agrarischen Entwicklung. (The geographical basis of Ghana's economy, with emphasis on agricultural development.) (Wiesbaden, Steiner, 1961) 308 pp (P).

A descriptive analysis together with a brief evaluation of the country's agricultural potential and the problems of future forms of agricultural association. (WAERSA 20/1963.)

BIRMINGHAM W *et al* A study of contemporary Ghana. Vol.I: The economy
GHA 110 of Ghana. (London, Allen & Unwin, 1966) 472 pp (P).

The authors' analysis of the agricultural sector concludes that past research, especially economic, has been inadequate, and that much larger capital investments will be necessary in future than have been made in the past. (WAERSA 3131/1966.)

2. REGIONAL STUDIES

WHITE H P 'Terre de barre': the basis of a West African agricultural
GHA 201 region. ("Bulletin de l'IFAN", Dakar, Jan.-Apr. 1965, pp 169-182.)

For summary see DAH 207.

3. LAND TENURE

BECHER H J
GHA 301 Bodenrecht in Ghana. (Agrarian law in Ghana.) ("Neues Afrika", Munich, 1963, No.4, pp 186-189.)

The effect of the uncertainty of agrarian legislation on perennial crops and on agricultural financing is noted. (WAERSA 2541/1963.)

HILL Polly
GHA 302 Migrant cocoa-farmers of Southern Ghana. (Cambridge University Press, 1963) 265 pp (P).

Not all Ghanaian cocoa farmers are peasant smallholders. This study deals with the development, from the late 1890's onwards, of large cocoa farms on forest lands in Akim Abuakwa. These were purchased by groups ('companies') of migrant Akwapim (and others) from the chiefs of the distant towns to which the almost uninhabited forest traditionally belonged. Cocoa sales first of all provided the profits out of which the land could be purchased by instalments, and were later used regularly to acquire more and more land for clearing and planting. The strips allotted to each member of a company remained his individual property, passing formally at death into the ownership of his family. The farmers are still strangers in the country settled by their forebears, regarding the towns from which they originally set out as their permanent base. One of the purposes of the study, which discusses aspects of land tenure, inheritance, management, wage-labour, finance and credit, is 'to destroy the myth of the sedentary peasant farmer who, though unfamiliar with the cash economy, nevertheless succeeded in the space of twenty years in transforming the economy of Ghana'.

7. CROP PRODUCTION

WADHAWA N D
GHA 701 Mechanical services to farmers in Ghana. ("Ghana Farmer", Accra, 1965, No.2, pp 64-70.)

Developments and micro-economic implications of the introduction of horse-drawn and mechanical cultivations. (WAERSA 2704/1966.)

LAWSON R M
GHA 702 Summary of a study of labour input into traditional agriculture on the Lower Volta of Ghana. ("Journal of Agricultural Economics", Manchester, 1967, No.3, pp 403-405.)

Implications of substituting capital for labour based on a study of the agricultural farming activity of 21 households over a period of 15 months. (WAERSA 3972/1967.)

ANON
GHA 703 An operational plan for the rehabilitation of the Ghana sugar industry. (London, Tate & Lyle Technical Services/Bookers Agricultural and Technical Service, 1968/Ghana Ministry of Industry/United Kingdom Ministry of Overseas Development) 3 vols.

Vol.I (91 pp) Main report and conclusions; Vol.II Appendices I to III, giving agricultural, technical, and personnel data for Asutsuare; Vol.III, Appendix IV, Financial schedules for Asutsuare, and Appendix V, Komenda.

Agricultural, manufacturing, financial, managerial, staffing, and training aspects of the industry are examined. In the light of this analysis, and of a number of previous reports on the Ghana sugar industry and on irrigation development (including a Polish feasibility study on Asutsuare, and Nippon Koei's report on sugar and rice production in the Accra plain), it is recommended that the Asutsuare estate should be rehabilitated, expanded, and put on a profitable basis of operation, with an eventual annual output of 41,000 tons of refined sugar. 10,000 acres of new land would be planted by the estate over a period of six years and 8,500 by farmers. Estimates are given of costs of production, of ex-factory selling price, and of return on investment. A decision on the future of the Komenda estate should be deferred pending collection of additional basic agricultural and financial data.

9. MARKETING/CONSUMPTION

LAMADE W
GHA 901
Studie über zwei Grossmärkte für Mais in Ghana. (Two Ghanaian wholesale markets for maize in Ghana.) ("Zeitschrift für ausländische Landwirtschaft", Frankfurt/Main, 1966, No.2, pp 92-103.)

Credit arrangements in the markets are examined and suggestions made for improving the marketing system. (WAERSA 3548/1966.)

LAMADE W
GHA 902
Möglichkeiten einer Maismarktpolitik in Ghana. (Possibilities for a marketing policy for maize in Ghana.) ("Zeitschrift für ausländische Landwirtschaft", Frankfurt/Main, 1966, No.3, pp 94-210.)

Attempts at price stabilisation since 1963 are critically examined. (WAERSA 375/1967.)

LA-ANYANE S & AFFUL E N
GHA 903
A report on guaranteed prices for maize. (Accra, University of Ghana, 1966) 16 pp.

Increased efficiency of production and marketing, and not guaranteed prices *per se*, are recommended as a corrective to the wide fluctuations in maize prices that have been mainly due to variations in supply. (WAERSA 2534/1967.)

DE FONT-REAULX H
GHA 904
Rapport sur les conditions d'exportation du riz malien vers la Côte d'Ivoire, le Ghana et le Sénégal. (Report on conditions for exporting rice from Mali to Ivory Coast, Ghana, and Senegal.) (Ségou, FAO, 1966) 33 pp.

Contains a brief assessment of supply and demand in Ghana, with estimates of transport and other costs of importing rice from Mali.

DURAND C J
GHA 905
Commercialisation du bétail en Haute-Volta. (Livestock-marketing in Upper Volta.) (Paris, SEDES, 1961) 3 vols.

Vol.I contains an analysis (Report No.5, pp 214-236) of supply, demand, market prices, and margins, for cattle and sheep in Ghana, and an assessment of future outlets for supplies from Upper Volta.

LACROUTS M, SARNIGUET J & TYC J
GHA 906
Exploitation du cheptel bovin au Mali. (The utilisation of the Mali cattle herd.) (Paris, SEAE, 1965) 296 pp (P).

Part V contains a chapter on demand, up to 1975, in Ghana.

HILL Polly
GHA 907
The North Ghanaian cattle trade. (From "Markets and marketing in West Africa", proceedings of a seminar held at the Centre for African Studies, Edinburgh University, 1966, ed. ORD W H *et al*, pp 65-80, and discussion pp 90-95.)

Analysis of Animal Health Division statistics of exports of cattle from northern Ghana to Kumasi and other southern markets discredits the traditional assumption that rearers only sell in the last resort. Except possibly in the north-east it is the economic efficiency of the cattle trader and not primarily social factors that appears to determine the timing of sales.

HILL Polly
GHA 908
Landlords and brokers. (From "Markets and marketing in West Africa", proceedings of a seminar held at the Centre for African Studies, Edinburgh University, 1966, ed. ORD W H *et al*,

pp 1-24 (including discussion).)

A consideration of the West African landlord system of long-distance trade, of which Ibadan cattle market is a typical and well-developed example, and some comparative material relating to Kumasi market where the traditional credit-guaranteeing function of the landlords has broken down. See also NGA 502.

SCHUERMANN R The market for processed fruit and vegetables in Ghana.
GHA 909 (Rome, FAO, 1967) 40 pp and Annexes.

Food habits and general supply and demand situation for processed good is considered, with special reference to tomatoes, citrus, and pineapple. Domestic market prospects for fruit juice and citrus marmalade in relation to demand for fresh fruit are examined, as well as marketing policy and distributive and selling practices for homegrown citrus and tomatoes and their relationship with imported competitive products. (FAO 01265/1967.)

ORD W H Agricultural commodity projections, rural growth and the gains
GHA 910 from trade. (In "African primary products and international trade", Edinburgh University Press, 1965, pp 95-116.)

Particular attention is given to Ghana, as providing a good case study of an externally dependent peasant economy, in this examination of the special problem of measuring changes in the subsistence food sector. (WAERSA 1998/1966.)

WRIGHT W D C A determinant of demand for food imports into West Africa.
GHA 911 (In "African primary products and international trade", Edinburgh University Press, 1965, pp 117-124.) (P).

A quantitative examination of the relationship between export earnings from Nigerian and Ghanaian primary products and the level of imports. (WAERSA 1415/1966.)

POLEMAN T T The food economies of urban Middle Africa: the case of Ghana.
GHA 912 ("Food Research Institute Studies", Stanford University, 1961, No.2, pp 121-174.)

An analysis of household budget surveys carried out in Accra, Kumasi, and Sekondi-Takoradi during the mid-1950's and an examination of the market chain for staple foods yielded two unexpected conclusions. Broadly speaking the supply system, even over a radius of 100 miles, was remarkably efficient, and wealthier urban consumers, instead of incorporating greater amounts of animal proteins in their diets, appeared to eat essentially the same type of food as their less fortunate neighbours.

WHITBY P Foods of Ghana. ("Food Research Institute Research Bulletin",
GHA 913 Stanford, Calif., 1968, No.1, pp 1-47.)

The preparation of traditional foods for sale or for consumption at home is described at length. (Tropical Abstracts r2220/1968.)

10. PROCESSING INDUSTRIES

CHRISTIAN W F K Food technology and the development of our food resources
GHA 1001 in Ghana. ("Ghana Farmer", Accra, 1965, No.4, pp 138-143.)

Present shortcomings are described, and possibilities examined of canalising a growing taste, at least in the towns, for imported convenience foods, by processing them locally. It is vital, however, that local agricultural supplies should be adequate and regular, including cocoa, which has a number of industrial as well as food uses.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

DU SAUTOY P
GHA 1101
Community development programmes in Nigeria, Ghana, and Sierra Leone. ("Développement et civilisations", Paris, 1965, No.21, pp 25-31.)

A comparison of methods. (WAERSA 3969/1966.)

HILTON T E
GHA 1102
The Volta Resettlement Project. ("Journal of Tropical Geography", Singapore, June 1967, pp 12-21.)

A critical examination of achievements so far.

LAWSON R M
GHA 1103
The Volta Resettlement Scheme. ("African Affairs", London, Oxford University Press, No.267, 1968, pp 124-129.)

A brief critical assessment, including developments since 1966 in favour of individual entrepreneurship, for which many of the settlers are not well equipped. A number of unfavourable factors have affected the progress of the Scheme: slow progress with land clearance; inadequate publicity and extension services; absence of co-operatives (the co-operative system having been used for political purposes under the CPP regime and discredited); delays in marketing crops, especially tobacco, even when successfully harvested, thus holding up farmers' cash returns; and a general lack of experience on the part of farmers in managing cash incomes and reluctance to transfer to a cash crop economy. Attempts have recently been made to secure a more rational changeover from subsistence to cash crop farming by introducing settlers to new techniques on mainly small subsistence holdings before they are transferred to larger, co-operatively organised, holdings.

13. STATISTICAL SERVICES

LAWSON R M
GHA 1301
The consumption approach to measuring agricultural production of foodstuffs. ("Food Research Institute Studies", Stanford Calif., 1965, No.3, pp 205-215.)

A study made for the University of Ghana, Accra, in which an attempt is made to estimate food production in Ghana on the basis of the 1961 Household Expenditure Survey for that country. Pending a full agricultural census, a survey of this kind could, in the author's view, be used to provide a more scientific approach to the problem of estimating agricultural production than the subjective estimates of agricultural officers. (WAERSA 1220/1966.)

GUINEA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

AMIN S
GUI 101
La Guinée: évolution 1959-62; le plan triennal 1960-63. (Guinea: developments between 1959 and 1962; the 1960-63 Three Year Plan.) ("Tiers-Monde", Paris, PUF, 1965, pp 131-165.)

A systematic analysis of the economic experience of three countries having a more radical 'socialist' form of organisation than their neighbours. In the author's view the significance of the 'socialist' alternative is somewhat limited and prospects of economic independence no greater than for other types of regime since all are equally affected by similar crises in public finance and foreign payments. (WAERSA 2232/1966.) The agricultural objectives of the Guinea Plan are listed and a tentative and generalised estimate made of what was achieved.

AMEILLON B
GUI 102

La Guinée: bilan d'une indépendance. (Guinean independence: a stock-taking. (Paris, Maspero, 1964) 205 pp.

There are only three references to agricultural policy, on pp 105, 107 and 113. Dumont's views are rejected, as being 'of little intrinsic value'.

DUMONT R
GUI 103

Afrique noire. Développement agricole. Reconversion de l'économie agricole: Guinée, Côte d'Ivoire, Mali. (Black Africa and its agricultural development. Reform of the agrarian economy in Guinea, Ivory Coast, and Mali.) (Paris, PUF, 1961) 212 pp (P).

Although dating from 1960, the section on Guinea (pp 7-63) provides a useful analysis of the main problems facing agriculture during the current decade.

HAIN W
GUI 104

Die Landwirtschaft der Republik Guinea. (Agriculture in the Republic of Guinea.) ("Geographische Berichte", Berlin, 1964, No.3, pp 178-193.)

Developments in agricultural policy since Guinea's independence are reviewed. (WAERSA 3266/1965.)

3. LAND TENURE

FRECHOU H
GUI 301

Le régime foncier chez les Soussous du Moyen-Konkouré. (Land tenure among the Soussous of Middle Konkouré.) ("Cahiers de l'ISEA", Série Humanités, Paris, 1962, No.4, pp 1(9-198.)

Description of a confused situation over property rights: a potential source of conflict which might one day be resolved acceptably by an official declaration that all land is to be in communal, village ownership.

4. CO-OPERATIVE FORMS OF ENTERPRISE

BITARD J
GUI 401

Le mouvement coopératif en Guinée. Bilan et perspectives. (The co-operative movement in Guinea: situation and outlook.) (Paris, Institut Français d'Action Coopérative, 1964) 35 pp.

A critical analysis of all aspects of co-operation in Guinea since independence, and of shortcomings to be made good in the future.

HIRSCHFELD A
GUI 402

Le rôle du mouvement coopératif dans la commercialisation de la banane en République de Guinée. (The role of the co-operative movement in the marketing of bananas in the Republic of Guinea.) ("Revue des Etudes Coopératives", Paris, 1966, No.143, pp 33-44). See also GUI 901.

Past history and present situation of the banana co-operatives. The author examines the view that producers who are members of co-operatives have insufficient influence over the marketing of their crops.

CAMADA T
GUI 403

La riziculture Baga et sa contribution au développement du mouvement coopératif guinéen. (Baga rice-growing and its contribution to the co-operative movement in Guinea.) (Paris, Collège Coopératif, 1967) 285 pp (typescript).

The social and economic organisation of the coastal region inhabited by the Baga is described, and rice-growing methods in this and other parts of Guinea compared. Development of rice production has been closely linked with co-operation: 75 per cent of Guinea co-operatives are rice co-operatives. Their development in Baga land before and since independence is described. The author concludes that the importance of the social aspects of co-operation has been neglected.

6. LIVESTOCK PRODUCTION

HAMON J L
GUI 701

Le rôle de l'élevage dans le progrès économique. (The role of livestock-raising in economic progress.) (Rome, FAO, 1967) 29 pp (not released).

Survey of animal resources and development potential.

7. CROP PRODUCTION

PHILIPPE J
GUI 701

Développement de la culture cotonnière: rapport au gouvernement de la Guinée. (Report to the Guinea government on the development of cotton production.) (Paris, CFDT, 1967/FAO) 14 pp.

Shortcomings of the first two seasons' operation of the project to raise the area under cotton on exisiing peasant holdings from 1,000 ha. in 1964/65 to 12,000 ha. in 1970/71 are examined. Recommendations are made on extension services, grants for spraying and fertilisers, encouragement of use of animal traction, marketing (the need for rapid transport and payment of the crop is stressed), and ginning.

ANON
GUI 702

Preliminary report on the possibilities of production of sugar at Médina-Ouala in the Republic of Guinée. (London, Bookers Agricultural and Technical Services Limited, 1965/Republic of Guinée) 27 pp and Tables (also French version).

The report concludes that sugar sufficient to supply a factory with an annual output of 30,000 tons and upwards could be grown in the area, but preliminary estimates suggest that irrigation and fertiliser costs would be relatively high. Extensive technical surveys should be carried out before large capital sums are committed.

9. MARKETING/CONSUMPTION

HIRSCHFELD A
GUI 901

Le rôle du mouvement coopératif dans la commercialisation de la banane en République du Guinée. (The role of the co-operative movement in the marketing of bananas in the Guinea Republic.) ("Revue des études coopératives", Paris, 1966, No.143, pp 33-44.) See also GUI 402.

In view of the dominant position of exporting interests, which are able to play off one banana-marketing co-operative against another, the author advocates either the formation of a union of co-operatives, which could deal direct with large overseas buyers, or a state-controlled purchasing organisation. The Guinea government, however, appears to be more concerned with promoting general 'agricultural production co-operatives' than with more efficient functioning of the specialised banana poodcers' co-operatives.

11. EXTENSION SERIICES AND COMMUNITY DEVELOPMENT

DE DECKER H
GUI 1101

Développement communautaire en Afrique Occidentale. Etude comparée des modèles guinéen et sénégalais. (The nation state and community development in West Africa. A comparative study of the Guinean and Senegalese models.) (Paris, Mouton, 1966/Université Lovanium de Kinshasa, Institut des

Sciences Politiques et Sociales) 470 pp (P).

A detailed examination of two aspects of the English concept of 'community development', though in neither country is it explicitly referred to in official documents. Senegal provides a model of what the author calls the 'integrative' type, in which the cadres of the Direction de l'Animation et de l'Expansion Rurale are inserted at every level from the Ministry of Agriculture downwards. In Guinea, on the other hand, the approach to community development has been 'adaptive', the Guinea Democratic Party exercising its influence without being organically integrated with the administration. The two countries are sufficiently alike in ecology, religion, and recent history to provide a basis for comparison of the different paths of development followed by each since independence. In practice a common concept of life and tradition of administrative routine tended to assert themselves and produce notably similar results. By means of interviews spread over five months and over all the regions of each country, at every administrative level as well as among farmers, the author has reached a number of conclusions: about official notions of community development; about the extent to which these have penetrated down to lower echelons and the way they were interpreted by the various development agencies and local staffs; about how far principles were carried into practice and the reactions to them of the local populations; and about the successes and failures of community development and their sociological implications.

13. STATISTICAL SERVICES

GHAZI M R
GUI 1301
Etablissement des statistiques agricoles. Rapport au gouvernement. (The establishment of an agricultural statistical service. Report to the government.) (Rome, FAO, 1966) 41 pp.

Geographical and demographic aspects of estimating average productivity of rice (paddy) and of land in the Dinguiraye region. Recommendations for statistical services.

IVORY COAST 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DE COTE D'IVOIRE, MINISTERE DES FINANCES, DES AFFAIRES ECONOMIQUE ET DU PLAN.
IVO 101
Perspective décennales de développement économique et social, 1965-1975. (Ten-year forecast of economic and social development, 1964-1975.) (Jan. 1964) 249 pp (P).

Chapter III (pp 111-155) is devoted to agricultural development. Targets (by quantity and value) for both 1970 and 1975 are given for all plant and livestock products.

GERARDIN B
IVO 102
Travaux préparatoires au Plan, 1971-1975. Estimations 1965 et perspectives provisoires pour les principaux produits vivriers: rapport No.62.(Preparatory work for the 1971-1975 Plan. 1965 estimates and preliminary projections for main food products.) (Abidjan, Ministère du Plan, Direction des Etudes de Développement, 1968) 44 pp.

Food balances, by region and by commodity, for 1965, and projections to 1975 and 1980.

DUMONT R
IVO 103

Afrique noire, développement agricole. Reconversion de l'économie agricole: Guinée, Côte d'Ivoire, Mali. (Agricultural development in Black Africa. Reform of the agrarian economy in Guinea, Ivory Coast, and Mali.) (Paris, PUF, 1961) 212 pp (P). See also GUI 103 and MAL 103.

The study on the Ivory Coast (pp 64-142) is divided into three sections. Three regions requiring priority action are first examined. The second section considers diversification of coffee production. The third deals with the means (extension services, co-operation, &c.) of achieving the necessary changes.

ANON
IVO 104

Etude pour la reconversion des cultures de caféier dans la République de Côte d'Ivoire. (Study on the renewal of the coffee-growing areas of the Ivory Coast Republic.) (Paris, BDPA, 1963) 18 parts, of which

1. (13 pp) Summary; 2.(169 pp and 269 pp) General Report (2 Vols.); 7. (96 pp) Agriculture in the coffee-growing zone; 9. (123 pp) Estimates of production, agricultural incomes, and domestic consumption of agricultural products; 13. (58 pp) Note on the internal market outlets for food crops (rice, yams, cassava, and plantains); 14. (40 pp) Ditto (tobacco, cotton, and hard fibres).

Since 60 per cent of the population of Ivory Coast derive more than half their income from coffee, this voluminous study is in the nature of an integrated national agricultural plan. Though it applies geographically only to the southernmost half of the country, it involves the whole country as far as its proposals for the development of an internal market economy for agricultural products (and of the necessary social and psychological stimuli to produce for the market) are concerned. The estimates contained in Part 9 are based on statistics which all are agreed must be treated with reserve, reinforced by the authors' personal observations on the ground. Internal demand to 1970 and 1975 is estimated in Parts 13 and 14.

ISRAEL, MINISTERE DES AFFAIRES ETRANGERES. Rapport d'une mission agricole en Côte d'Ivoire. (Report of an agricultural mission to the Ivory Coast.) (Jerusalem, Centre d'études comparées pour le développement rural, 1963) 162 pp.
IVO 105

A critical assessment of government policy for expanding agricultural output, with mainly technical recommendations. Separate sections deal with field crops, tree crops, livestock-raising, and veterinary services.

ROUGERIE G
IVO 106

Das Problem des Bauerntums im Waldgebiet der Elfenbeinküste. (Problems of farming people in the forest areas of the Ivory Coast.) ("Erde", Berlin, 1963, Nos.3/4, pp 265-280.)

The Ivory Coast is generally considered a country with a sound economy, but there are certain disturbing symptoms, which are highlighted in this study. (WAERSA 953/1964.)

ROQUES P
IVO 107

La Côte d'Ivoire vers le 'take-off' économique. (Ivory Coast moving towards economic 'take-off'.) (Paris, "Receuil Penant", 1966, 12 pp, from "Penant", No.711, Apr.-June 1966.)

The author prefers the automobile metaphor to that of the aeroplane. The country is moving forward, the transmission is functioning, but will the gear-box work?

AMIN S
IVO 108

Le développement du capitalisme en Côte d'Ivoire. (The development of capitalism in Ivory Coast.) (Paris, Editions de Minuit, 1967) 330 pp (P).

Two chapters (pp 48-72) examine agricultural output, and income distribution in rural areas respectively. Another (pp 153-198) deals with the distribution of urban incomes.

DOBRZKA Z — Economic development of the Ivory Coast since independence.
IVO 109 — ("Africana Bulletin", Warsaw, No.5, 1966, pp 9-32.)

2. REGIONAL STUDIES

REPUBLIQUE DE COTE D'IVOIRE, MINISTERE DU PLAN. Etude régionale de
IVO 201 — Bouaké 1962-1964. (Study of the Bouaké Region 1962-1964.) (Abidjan, Bureau de Conception de Coordination et d'Exploitation des Etudes Régionales, undated.)

Vol.I The Population (287 pp (P).) Vol.II The Economy (319 pp P).) Vol.III provides, from the agricultural point of view, an exhaustive descriptive analysis of supply and demand, and of the market and distributive structure. An Annexe gives the findings of a budget survey among rural families, and of a food and nutrition survey. Vols. III and IV will present a summary report and a development plan for the region respectively.

BLANCHE M *et al* Aménagement hydro-agricole dans le bassin du Solomougou.
IVO 202 — Etude socio-économique. (Development of irrigation and agriculture in the Solomougou basin: a social and economic study.) (Paris, SEDES, 1961) 84 pp.

Proposals for the development of agricultural, mainly rice, production over a seven-year period. Investment plan and cost-benefit analysis.

BARACHETTE *et al* Région de Korhogo, étude de développement socio-
IVO 203 — économique. (Socio-economic development study of the Korhogo Region.) (Paris, SEDES, 1965) 9 vols. (P).

Vol.1 (52 pp) Summary Report; Vol.2 (101 pp) Demography; Vol.3 (101 pp) Sociology; Vol.4 (263 pp) Agriculture; Vol.5 (151 pp) Soil survey; Vol.6 (109 pp) Family budget study. The artisan population; Vol.7 (150 pp) Trade and Transport; Vol.8 (92 pp) Regional accounting: 1963-1970-1975; Vol.9 (268 pp) Proposed action.

A comprehensive economic survey of the northern region of Korhogo, which consists of about one-tenth of the total area of the Ivory Coast. In 1963 it comprised 8 per cent of the population, but only accounted for 2.7 per cent of GDP. The study includes estimates of agricultural production and food consumption up to 1975, and makes recommendations for development policy.

ANON — Etude générale de la région de Man. (General study of the
IVO 204 — Man region.) (Paris, BDPA, 1967) 7 vols (P).

Vol 3 (425 pp) Agricultural report, describes the natural resources of the area and the structure of its agriculture, and makes proposals for future action. Vol.3c (86 pp) Agricultural survey, presents the results of a survey of the demography of the region and of the structure of land tenure and of production.

3. LAND TENURE

VERDIER R — Problèmes fonciers ivoiriens. Aspects juridiques et
IVO 301 — sociaux. (Problems of land tenure in Ivory Coast. Legal and social aspects.) (Paris, "Documentation africaine", 1963,7 pp.) (Extract from "Penant", No.697, June-Sept. 1963, pp 263-269.)
A descriptive analysis.

4. CO-OPERATIVE FORMS OF ENTERPRISE

LE FLOCH G Le mouvement coopératif en Côte d'Ivoire: bilan et perspectives. (The co-operative movement in Ivory Coast: situation and outlook.) (Paris, BDPA, 1964) 40 pp.
IVO 401

The author concludes that except in the banana sector, the co-operative movement, which received a considerable impulse in 1959, has recently lost a good deal of its momentum.

CHASSARD P E Eloka-Té: coopérative villageoise en pays Ebrie. (Eloka-Té: a village co-operative in Ebrie country.) (Université de Bordeaux, Faculté des Lettres et des Sciences Humaines) (thesis) 169 pp (P).
IVO 402

A description of a multi-purpose co-operative (production, marketing, management, and storage), its historical development, activities, and place in the social and economic life of the village. Results are given of a budget enquiry covering 5 families (37 persons) whose heads were members of the co-operative. Multi-purpose co-operatives, except for a few very vigorous ones like this, close to and with good communications with Abidjan, have tended to disappear in recent years. Those surviving have switched their main activities from production to marketing.

6. LIVESTOCK PRODUCTION

LACROUTS M & TYC J Les ressources animales de la République de la Côte d'Ivoire. (The livestock resources of the Ivory Coast Republic.) (Paris, SEDES, 1961) 169 pp (P) and Annexes.
IVO 601

Current demand and supply situation and marketing arrangements. Ten-yearforecast and recommendations for improved distribution, with particular reference to Abidjan.

7. CROP PRODUCTION

DAUBREY A et al Plan de développement de la riziculture 1963-1970. (Rice-growing development plan 1963-1970.) (Abidjan, Ministère de l'Agriculture et de la Coopération, Bureau d'Etudes et de Réalisations Agricoles, 1962) 172 pp.
IVO 701

Existing practice and necessary improvements are examined, and proposals made for extension services, processing and marketing. The report concludes that the objective of making the Ivory Coast self-sufficient in rice by 1970, however desirable in itself, cannot be achieved except at considerable risk, since the increased production will depend on the expanded output of tens of thousands of smallholdings producing at present only for self-subsistence.

CHABROLIN & SORDOILLET Rapport sur le développement de la riziculture en Côte d'Ivoire. (Report on the development of rice-growing in Ivory Coast.) (Paris, IRAT, 1964/République de Côte d'Ivoire Ministère de l'Agriculture et de la Coopération) 102 pp and Annexes.
IVO 702

Supply and demand position, and the obstacles, social and technical, to the development of production, marketing and processing are examined. The alternative open to the proposed state Rice Board (SODERI) are considered: geographical priorities; specialised rice-growing or production as part of a farm rotation?; irrigated production or not?; main stress to be laid on production or marketing? The principal means of action, with special stress on extension work, are recapitulated.

DE LESPINOS P Enquête sur la riziculture dans 15 villages des environs
IVO 703 d'Abengourou. (Survey of rice-growing in 15 villages in the Abengourou area.) (Abengourou, Centre de Formation SATMACI, 1968) 29 pp.

The enquiry, whose findings are subject to a number of caveats, covered acreages, yields, the structure of the working population, and included a questionnaire on farmers' intentions with regard to the adoption of various improved methods.

ANON Programme de développement de la riziculture en Côte d'Ivoire
IVO 704 pour la période 1969-1975. (Development programme for rice-growing in the Ivory Coast for the period 1969-1975.) (?Abidjan, SATMACI, 1968) 2 vols. 128 pp and 121 pp.

Detailed projects and production targets.

COTE D'IVOIRE, MINISTERE DES FINANCES, DES AFFAIRES ECONOMIQUES ET DU
IVO 705 PLAN. Projet de création de '32,000 hectares' de palmier à huile. (Proposal to plant '32,000 hectares' of oil palm.) (Abidjan, 1964).

Vol.I (155 pp) Market and price study; Vol.II (97 pp, maps and photographs) Geographical limits of the palm project; Vol.III (189 pp) Technical specifications; Vol.IV (72 pp) Social aspects of the project; Vol.V (31 pp) Economic and financial objectives. Conclusions and list of participants and organisations, persons and documents consulted (19 pp).

The "32,000 hectares" scheme (the inverted commas are due to the original objective having been subsequently modified to 25,000 hectares) is the most ambitious aspect of the Ivory Coast government's project to diversify the agricultural economy from too great dependence on coffee production. The investment, whose yield up to 1967 is assessed in Vol.5, is being financed by the European Development Fund. 33 French experts were concerned in the preparation of the project.

ANON Etude pour la reconversion des cultures de caféier dans la
IVO 706 République de Côte d'Ivoire. (Study on the renewal of the coffee-growing area of the Ivory Coast Republic.) (Paris, BDPA, 1963) 18 parts.

For summary see IVO 104.

DENEUFBOURG L Les problèmes posés par la mécanisation agricole en Côte
IVO 707 d'Ivoire. (Problems of mechanising agriculture on the Ivory Coast.) ("Machinisme agricole tropical", Antony, 1966, No.2, pp 43-47.)

A discussion on human, technical and economic aspects of mechanisation. (WAERSA 2620/1964.)

RENAUT G Contributions au développement de la culture attelée en
IVO 708 Côte d'Ivoire. (Contribution to development of animal traction in agriculture in the Ivory Coast.) ("Machinisime agricole tropical", Antony, 1966, No.15, pp 34-35.)

Results show that both food and cash crops can be produced at lower unit cost with animal traction than by traditional methods. The area cultivated per man and yields per ha. were trebled. (WAERSA 1730/1967.)

KELLERMANN J La consommation des engrais en Côte d'Ivoire. (Demand
IVO 709 for fertilisers in the Ivory Coast.) (Paris, Ministère de la Coopération, 1963) 40 pp.

After detailing imports (effectively consumption) of all types of fertiliser for 1960 and 1961, the author estimates usage for each crop, according to current rates of application, and forecasts likely demand in 1970. These forecasts, which are to be treated with due reserve, vary substantially according to assumptions about developments in areas under cultivation, as well as about the effectiveness of extension services and credit facilities in encouraging more widespread use of fertilisers.

9. MARKETING/CONSUMPTION

GABET M R
IVO 901

Détermination des circuits d'écoulement des produits vivriers en Côte d'Ivoire. (Analysis of market outlets for food crops in Ivory Coast.) ("Bulletin de liaison du Ministère de l'Agriculture de Côte d'Ivoire", Abidjan, 1964, No.23, pp 28-41.)

A brief study of prices, quantities and distributive facilities, followed by recommendations for future action to improve the market structure, and containing a reminder of the relative nutritive value of the principal crops.

LACROUTS M & TYC J
IVO 902

Les ressources animales de la République de la Côte d'Ivoire. (The livestock resources of the Ivory Coast Republic.) (Paris, SEDES, 1961) 169 pp (P) and Annexes.

Current demand and supply situation and marketing arrangements. Ten-year forecast and recommendation for improved distribution, with particular reference to Abidjan.

LACROUTS M, SARNIGUET J & TYC J
IVO 903

Exploitations du cheptel bovin au Mali. (The utilisation of the Mali cattle herd.) (Paris, SEAE, 1965) 296 pp (P).

Part V contains a chapter on demand, up to 1975, in the Ivory Coast.

ANON
IVO 904

Le marché des produits laitiers en Côte d'Ivoire. (The market for dairy products in the Ivory Coast.) (Paris, CNCE, 1967) 165 pp (P).

There are sections on recent developments in production, the local dairy industry, and competition in the market for imports.

DE FONT-REAULX H
IVO 905

Rapport sur les conditions d'exportation du riz malien vers la Côte d'Ivoire, le Ghana, et le Sénégal. (Report on conditions for exporting rice from Mali to Ivory Coast Ghana, and Senegal.) (Ségou, FAO, 1966) 33 pp.

Contains a brief assessment of supply and demand in the Ivory Coast, with estimates of transport and other costs of importing rice from Mali.

KADIO E
IVO 906

Le commerce de la banane en Côte d'Ivoire. (The banana trade in the Ivory Coast.) ("Fruits", Paris, 1966, No.11, pp 607-612.)

The importance of the banana for the country's economy is outlined. There is still a great difference in efficiency between large European-owned plantations and African farms. (WAERSA 2591/1967.)

RAMBOZ Y C
IVO 907

La politique caféière de Côte d'Ivoire et la réforme de la caisse de stabilisation des prix du café et du cacao. (Coffee policy in the Ivory Coast and reform of coffee and cocoa prices by the Stabilisation Fund.) ("Revue juridique et politique", Paris, June 1965, pp 194-218.)

The role and position of the Fund in the Ivory Coast is examined. (WAERSA 249/1966.)

HIRSCH A R
IVO 908
The development and organisation of commerce in the Ivory Coast and Senegal. ("Pacific View Point", Wellington, 1965, No.2, pp 167-178.) (WAERSA 2231/1966.)

LE CHAU
IVO 909
Le commerce dans la région de Bouaké. Une étude économique du commerce régional et interrégional dans l'Ouest Africain. (Trade in the Bouaké region. A study of regional and interregional trading in West Africa.) ("Cahiers de l'ORSTOM", Paris, Série Sciences Humaines, Vol.III, No.3, pp 3-105.)

Description of distribution and marketing of agricultural produce, and recommendations for their reorganisation.

LE CHAU & BOUTILLIER J L
IVO 910
Enquête socio-économique sur la ville de Bouaké. (Bouaké city, socio-economic study.) (Paris, SEDES, 1961) 115 pp and Annexes.

Chapter 3 analyses household budgets.

GOUVERNEMENT DE LA REPUBLIQUE DE COTE D'IVOIRE, MINISTERE DES FINANCES, DES AFFAIRES ECONOMIQUES ET DU PLAN.
IVO 911
Villes de Côte d'Ivoire, Man, Daloa, and Ganoa. Enquête socio-économique 1961. (Sociological and economic survey of three Ivory Coast cities: Man, Daloa, and Ganoa, 1961.) (Paris, SEDES, 1962) 62 pp and Annexes (176 pp).

Chapter 3 gives results of a household budget enquiry.

BOUTILLIER J
IVO 912
Enquête nutrition, niveau de vie. Subdivision de Bongouanou 1955-56. (Nutrition and standard of living survey, Bongouanou subdivision, 1966-1956.) (Paris, Imprimérie de Servant Grouzet, 1958) 183 pp (P).

A pre-independence survey covering demography, agricultural structure, nutrition, child health, housing, and family budgets.

BOUTILLIER J L & CAUSSE J
IVO 913
An enquiry into levels of living in an area of the Ivory Coast. (From "Family Living Studies", International Labour Office, Geneva, 1961, pp 245-268.)

Outline findings of the family budget survey carried out in Bongouanou in 1955/56 (IVO 912), a description of the methodology employed, and some critical comments on practical aspects of the field enquiry, and of analysis and presentation of the material.

COTE D'IVOIRE, MINISTERE DU PLAN.
IVO 914
Budgets familiaux des salariés africains en Abidjan, août-septembre 1956. (Family budgets of African wage-earners at Abidjan, August-September 1956.) (Abidjan, 1958) 146 pp (P).

Methodology and findings of a sample survey, with special reference to food, consumer durables, and housing.

ROY
IVO 915
Notes sur les dépenses des ménages dans quelques pays d'outremer. (Note on household expenditure in a number of overseas countries.) (Paris, SEDES, undated) 40 pp.

Part 1 gives the results of a family budget survey among African wage-earners in Abidjan in 1958.

CHAPUIS Y
IVO 916
Résultats d'une enquête sur la malnutrition protidique à Abidjan. (Findings of a survey of protein deficiency in Abidjan.) ("L'enfant en milieu tropical", Paris, No.42, 1967, pp 13-19.)

Includes an enquiry into the social background of the 97 children covered by the survey, who mostly came from Abidjan suburbs and neighbouring villages.

10. PROCESSING INDUSTRIES

REPUBLIQUE DE COTE D'IVOIRE, MINISTERE DES FINANCES, DES AFFAIRES
IVO 1001 ECONOMIQUE ET DU PLAN. Perspectives décennales de développement économique et social: l'expansion industrielle. (Ten-year forecasts of economic and social development: industrial expansion.) (Abidjan, 1963) 237 pp, 2 parts.

Part 1 contains development forecasts, with output for 1970, covering rice and maize milling; baking, confectionery, biscuit-making, and 'pasta' manufacture; canning of fruit and fruit juice; fish canning; coffee, tea and cocoa; soft drinks; dairy products; cocoa and banana products; sugar; tobacco; and products derived from cassava and yams.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

ANON
IVO 1101 Premiers résultats d'enquêtes obtenus dans le village-pilote de Laptinkaha. (Zone de Korhogo - Côte d'Ivoire). (Initial results from the pilot village of Laptinkaha in the Korhogo region of the Ivory Coast.) ("L'Agronomie Tropicale", Paris, 1965, No.2, pp 147-219.)

The results of this pilot study are considered to be of great importance for general prospects of advisory work. The village will be developed into a model village for modernised agriculture. (WAERSA 1874/1966.)

DE WILDE J C
IVO 1102 Experiences with agricultural development in Tropical Africa. (Baltimore, IBRD, 1967) Vol.II, Case studies, Ivory Coast: the program of 'animation rurale' in the Bouaké region, pp 391-414.

A description of the work of the CIDR (Compagnie Internationale du Développement Rural), showing how applied research (in this case mainly by the CFDT into cotton) can be effectively linked with extension services through the activity of selected 'animateur' farmers and the 'conseillers d'animation', both European and Ivory Coast, advising them. Since experience indicates that the ordinary farmer can easily become confused and antagonised by too many separate approaches, it is desirable that in the long run the official extension services should so far absorb and practise the principles of 'animation rurale' as to make superfluous an independent organisation of the kind provided by CIDR.

CAMPAGNE P
IVO 1103 L'animation rurale. (Abidjan, Ministère du Plan de la Côte d'Ivoire, Direction de l'Animation et de la Productivité, 1968) 55 pp.

Working paper for the preparation of the 1971-1975 Plan.

VERDIER R
IVO 1104 Le recrutement et la formation des cadres moyens agricoles dans la perspective du développement économique des Etats de Côte d'Ivoire, Niger, RCA, et Tchad. (Recruitment and education of middle-grade agricultural cadres seen against the background of economic development in Ivory Coast, Niger, the CAR, and Chad.) (Paris, BDPA, 1967) 57 pp.

For summary see CHA 1103.

13. STATISTICAL SERVICES

MONTERO M A
IVO 1301 Organisation d'un service de statistique agricoles. (Organisation of an agricultural statistical service.) (Rome, FAO, 1963) EPTA Report 1790, 27 pp.

Historical summary, present arrangements, and recommendations for future action.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIC OF KENYA. Development Plan for the period 1965/66 to 1969/70.
KEN 101 (Nairobi, 1964) 384 pp (P).

The part of the Plan dealing with agriculture (pp 124-203) is divided under: A. Crop production, in which the former African and former scheduled areas are treated separately, and there are sections on credit, education, food crops, and export crops; B. Livestock production; and C. Co-operatives.

LEAVEY E H *et al* The economic development of Kenya. Report of a Mission
KEN 102 from the IBRD. (Baltimore, Johns Hopkins Press, 1963) 380 pp (P).

The section on agriculture (pp 63-145) contains a general description of the farming pattern; of recent developments in both the scheduled and non-scheduled areas; of agricultural education and extension; of improvements in crop and livestock output; and of production and marketing policies. Prospects for each locally-produced commodity are assessed. On pp 154-157 the situation for food industries, beverages, tobacco, textile, and shoe production is described. The mission's main conclusions and recommendations for the agricultural sector are summarised on pp 301-305, covering basic policy, water, production and marketing, development, staffing, research, and animal husbandry. There is an annexe on agricultural statistics and their improvement.

DE WILDE J C *et al* Experiences with agricultural development in tropical
KEN 103 Africa. (Baltimore, Johns Hopkins Press, 1967/IBRD) Vol.II Case Studies, 466 pp (P).

The introductory chapter (pp 3-32) to Part I, Kenya, summarises the recent history and current situation of the land reform, agricultural extension and education, credit, and market organisation.

ANON Commonwealth development and its financing: II. Kenya.
KEN 104 (London, Commonwealth Secretariat, 1967) 98 pp (P).

The report includes a description of agricultural development plans and policies since 1945. Future objectives are also defined.

RUTHENBERG H African agricultural development policy in Kenya, 1952-
KEN 105 1965. (Berlin, Springer Verlag 1966/Munich, Ifo-Institut für Wirtschaftsforschung) 180 pp (P).

Kenya provides an outstanding example of consistent and intensive promotion of smallholder farming. The report includes a cost benefit analysis of the different approaches to agricultural development between 1952 and 1965, changes since independence, and future aspects of development policy. (WAERSA 3217/1966.)

RUTHENBERG H Der wirtschaftliche Erfolg landwirtschaftlicher Förderungs-
KEN 106 massnahmen in Kenya. (The economic consequences of agricultural development measures in Kenya.) ("Afrika heute", Bonn, No.13, 1966, pp 194-199.)

A number of major post-war schemes for developing agriculture and stimulating higher output are briefly described (grazing schemes, settlement of dry lands, 'low density' schemes, irrigation projects, extension services in three districts, and creation of tea smallholdings). The rate of yield on each of these investments, measured in terms of both increased marketable output and of tax revenue, is estimated, ranging from nil in each case on the grazing schemes, to 50 per cent and 23 per cent respectively on the tea-planting project. Between 1954 and 1961 annual government investment averaged between 6 and 9 per cent of total agricultural output; recently the rate has risen to 14 per cent. The author argues that in future, apart from some unavoidable irrigation and resettlement schemes, large-scale capital expenditure in agriculture (subsidised because yielding a very low rate of return in the form of taxes) should be avoided. The aim must be to lower production costs through higher yields (efficient advisory services being already in place), and improve market outlets so as to take advantage of the rising purchasing power of consumers in the non-agricultural sectors. It is in these sectors that capital expenditure should now be concentrated, and surplus labour attracted to them from agriculture.

HEYER J
KEN 107
Kenya's agricultural development policy. ("East African Economic Review", Nairobi, 1966, No.2, pp 35-47.)

A critical examination of the agricultural aspects of Kenya's current Development Plan. (WAERSA 2403/1967.)

HELMSCHROTT H
KEN 108
Entwicklung und Entwicklungspolitik in Ostrafrika: Kenya. (Development and development policy in East Africa: Kenya.) (Munich, Ifo-Institut für Wirtschaftsforschung, 1965/ Bundesministerium für wirtschaftliche Zusammenarbeit) 133 pp.

One of a series of studies carried out for the Federal Ministry for Economic Co-operation to assess critically the general pattern of development planning in each country; to describe the nature and scope of current multilateral and bilateral assistance; and to propose the most desirable forms of, and method of organising economic structure. There is a special note on development aid to the East African Common Services Organisation.

CLAYTON E
KEN 109
Economic planning in peasant agriculture. (Wye, Department of Agricultural Economics, University of London, 1963) 69 pp (P).

The study investigates, by programming, the gradual substitution of more labour intensive crops for less intensive products on family farms by using hired labour. (WAERSA 2798/1863.)

KENYA, MINISTRY OF ECONOMIC PLANNING AND DEVELOPMENT.
KEN 110
Some economic case studies of farms in Nandi and West Pokot Districts 1963/641 (Nairobi, Report of the Farm Economics Survey Unit, 1965, No.23) 89 pp.

An examination of new patterns and methods of production, obstacles to increased production, credit arrangements, and farmers' attitudes to improved production methods as a source of income and prestige. (WAERSA 3731/1966.)

BARBER W
KEN 111
Some questions about labour force analysis in agrarian economics, with particular reference to Kenya. (Nairobi, University College, Centre for Economic Research, 1965) CER discussion Paper No.13, 24 pp.

A discussion of future employment opportunities in the primary sector and a critical assessment of some recent methods of analysing labour trends.

HEYER J
KEN 112
The economics of small-scale farming in Lowland Machakos. (Nairobi, Institute for Development Studies, 1967). Occasional Paper No.1, 82 pp.

Some practical implications for development policy are derived from a farm production study in Masil location. A brief discussion of the possibilities (in the author's view insufficiently exploited) of using linear programming techniques for analysis of routine farm production studies by the Kenya Government Farm Economics Survey Unit to suggest answers to policy questions.

2. REGIONAL STUDIES

DE WILDE J C et al Experiences with agricultural development in tropical
KEN 201 Africa. (Baltimore, Johns Hopkins Press, 1967/IBRD) Vol.II
Case Studies, 466 pp (P).

Part I (pp 3-241) examines the course of development in five different districts. Achievements and shortcomings in each are analysed. The particular issues involved in settlement schemes and irrigation schemes are then considered separately, and recommendations made for the future.

3. LAND TENURE

FLIEDNER H Die Bodenrechtsreform in Kenya. (Reform of land tenure
KEN 301 in Kenya.) (Berlin, Springer Verlag/Munich, Ifo-Institut
für Wirtschaftsforschung, 1965) 136 pp.

An examination of the results of the 1954 land legislation, one of which was the emergence of two sharply differentiated classes of land-owners and landlords. (WAERSA 1531/1966.)

SORRENSON M P K Land reform in the Kikuyu country. (London, Oxford
KEN 302 University Press, 1967) 266 pp (P).

Reasons for land consolidation and registration and methods employed to bring them about are discussed in their political, social, and economic contexts.

WHETHAM Edith Land reform and resettlement in Kenya. ("East African
KEN 303 Journal of Rural Development", Nairobi, 1968, No.1, pp
18-29.)

The main aspects of the 1962-66 resettlement programme are described, its achievements summarised, and future prospects for the 30,000 resettled families assessed. The vital need for good all-weather roads and for developing markets for the new farms' main products is stressed.

NOTTIDGE C P R & GOLDSACK J R The million-acre Settlement Scheme
KEN 304 1962-66. (Nairobi, Department of Settlement, 1964) 44 pp.

A descriptive analysis of the transfer of large-scale European-owned farms to African ownership. (WAERSA 3274/1966.)

4. CO-OPERATIVE FORMS OF ENTRRPRISE

NEWIGER N Co-operative farming in Kenya and Tanzania. (Munich
KEN 401 Ifo-Institut für Wirtschaftsforschung, 1967) 157 pp.

Part 1 consists of a survey of Kenyan economic and social conditions designed as a working document for settling up farming co-operatives. (WAERSA 4257/1967.)

5. CAPITAL AND CREDIT

VASTHOFF J Small farm credit and development. Some experiences in
KEN 501 East Africa, with special reference to Kenya. (Munich,
Weltforum Verlag, 1969/Ifo-Institut für Wirtschaftsforschung)
Afrika Studien No.33, 144 pp (P).

A detailed field study of 108 small farms in the Rift Valley and Western Nyanza forms the main part of this examination of the effectiveness of credit, granted mainly for the purchase of live and dead stock, and of farmers' reactions to it. An introductory chapter describes the available sources of credit. Comparisons are made with experience in Uganda and Tanzania. The study concludes with a summary of recommendations for future policy on priorities for the object of loans, on the screening of applicants, on supervision and advice, on method of repayment and on responsibility for collection.

6. LIVESTOCK PRODUCTION

HEUFELDER H
KEN 601
Über einen Mölkereibetrieb in Kenya. (A dairy enterprise in Kenya.) ("Zeitschrift für ausländische Landwirtschaft", Frankfurt/Main, 1964, No.4, pp 368-373.)

Includes an examination of the prospective market for dairy products including powdered skimmed milk, buttermilk and cheese. (WAERSA 164/1965.)

7. CROP PRODUCTION

BROWN L H
KEN 701
A national cash crops policy for Kenya. (Nairobi, Government Printer, 1963) 133 pp (P).

A cash crops development plan for Kenya is presented covering a large variety of crops including those of only minor importance on the world market. (WAERSA 643/1965.)

GRENFELL J
KEN 702
Kenya's new breed of tea planter. ("Finance Development", Washington, DC, 1967, No.2, pp 81-91.)

The plan to increase the 24,000 ha. of land now under tea to 40,000 ha. by 1970, mainly on smallholdings, is described. (WAERSA 230/1968.)

ANON
KEN 703
The development of tea in Kenya. (London, Inbucon Limited, 1969/Government of Kenya/IBRD) 351 pp.

An appraisal and plan for the development of improved transportation, the location and structuring of tea factories, and the introduction of incentives for growers. Technical aspects include standards for road construction and maintenance, methods of green leaf collection, and overall control of quality.

MacARTHUR J D
KEN 704
Some thoughts on future trends in farm employment in Kenya (in "Education, employment, and rural development", report of the Kericho (Kenya) Conference, 25th September to 1st October, 1966, pp 122-140) (P).

The greatest opportunity for economic expansion and the creation of new employment opportunities in the small farm sector lies in expansion of cash cropping. The appendix tabulates figures on production and labour use on (1) small farms including settlement and irrigation areas, and (2) on large-scale mixed farms. No attempt is made at quantitative projections. (WAERSA 3694/1968.)

HEYER J
KEN 705
Some problems in the valuation of subsistence output. (Nairobi, University College, Centre for Economic Research) Discussion Paper No.65, 23 pp.

A number of concepts, suggested partly by experience of farming in Lowland Machakos, are put forward for discussion.

8. IRRIGATION

GOLKOWSKI R Bewässerungslandwirtschaft in Kenya. Die Darstellung grundsätzlicher Zusammenhänge unter besondere Berücksichtigung des Mwea-Tebere-Projekt. (Irrigated agriculture in Kenya. Basic considerations, with special reference to the Mwea-Tebere project.) (Munich, Weltforum Verlag, 1969/ Ifo-Institut für Wirtschaftsforschung) Afrika Studien No. 39, 160 pp (P).
KEN 801

An enquiry into the organisation and rationalisation of the Mwea-Tebere irrigation settlement, up to the present the largest project of its kind in East Africa. Possible improvements and future lines of development are discussed.

9. MARKETING/CONSUMPTION

SINGH C (Chairman) *et al* Report of the Maize Commission of Enquiry. (Nairobi, Government of Kenya, 1969) 204 pp (P).
KEN 901

Besides an examination of the distribution and marketing of maize, and of its current defects, present levels of supply and demand, and factors which may cause alterations in these levels, are also considered. Lack of reliable statistics on the subsistence sector and on food consumption is stressed. (WAERSA 3477/1966.)

ROWE J W F The coffee industries of East Africa in the world market setting. (In "African primary products and international trade", Edinburgh University Press, 1965, pp 83-94.)
KEN 902

Suggestions for maintaining and improving the position of Kenya, Tanzania, and Uganda in the world coffee trade. (WAERSA 1452/ 1966.)

CLARK R Sugar consumption in Kenya. ("East African Journal of Rural Development", Nairobi, 1968,No.1, pp. 48-51.)
KEN 903

The effects of income changes on consumption over a ten-year period are examined. At the 1965 level of income an income elasticity of demand of .724 is estimated.

MANN I The organisation of the livestock and meat trade in Kenya. Working paper No.5A of the proceedings of the FAO/Danish Government *ad hoc* consultation on abattoir development, held at Roskilde, Denmark, 24th-29th July, 1967.
KEN 904

Description and recommendations for improvement.

12. RURAL/URBAN RELATIONS

OGENDO R B The significance of industrial zoning to rural industrial development in Kenya. A study of facts and methodology. ("Cahiers d'Etudes Africaines", Paris, 1967, No.3, pp 444-484.)
KEN 1201

The existing pattern of industrial location and the factors determining it are described in considerable detail, with the aid of maps. The degree of concentration of each type of industry is analysed both by district and by province. Greater decentralisation of industry is recommended, and especially of rural industries, by means of variable incentives in the form of cash grants, loans, and tax exemptions.

ETHERINGTON D M Projected changes in urban and rural population in
KEN 1202 Kenya and the implications for development policy. (In "Education, employment and rural development": report of the Kericho (Kenya) Conference, 25th September to 1st October, 1966, pp 54-74.P (P). (Nairobi, Africa Publishing House, 1967.)

The paper indicates the significance of different rates of growth of urban and total population and makes some provisional projections up to 1990 for the rural population. Like other African countries, Kenya faces a rapid rate of population growth before any significant industrialisation has taken place. Much more research is needed to enable optimum use to be made of land resources that are currently being used at a very low level of productivity. (WAERSA 3995/1968.)

KIANO J G The social, economic and political effects of urban agglo-
KEN 1203 merations in Kenya. Working paper No.16 for the 34th study session of INCIDI, Aix-en-Provence, September 1967, 25 pp (P).

The historical development of Kenyan towns, including the growth in the numbers and economic influence of the Asian population, is briefly sketched. The measures being taken to deal with the problems, inherited from the colonial era, of low wages, bad housing, and unemployment among unskilled and semi-skilled Africans are described. In the long term the development of agriculture and the reduction of underemployment on the land will provide the main stimulus to sound urban growth and industrialisation.

LESOTHO 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

ANON Five-year Development Plan 1967-1972. (No place or date
LES 101 of publication.) 102 pp.

This draft plan, not formally approved by the Lesotho Government, should be read, it is stated, in conjunction with the report of a mission from the United Kingdom Ministry of Overseas Development, with whose recommendations the Lesotho Government did not find itself in agreement on all points. The section on agriculture covers crop and livestock production (pp 14-40) and credit, credit institutions and co-operatives (pp 41-46). Industrial enterprises to be developed (pp 47-49) include cottage industries, an abattoir, and processing wool and mohair, hides and skins.

BAWDEN M G & CARROLL D M The land resources of Lesotho. (Land
LES 102 Resources Division, Directorate of Overseas Surveys, Tolworth, 1968.) Land Resources Study No.3, 89 pp (P).

The environment, in its physical and human aspects, is described. The agricultural potential of the land is classified according to its suitability for cultivations (semi-extensive or extensive) or livestock production (smallstock or largestock). Future possibilities for development of each area are discussed in the light of soil, climate and communications.

4. CO-OPERATIVE FORMS OF ENTERPRISE

ANON
LES 401
The co-operative movement in Lesotho. (London, Plunkett Foundation for Co-operative Studies, 1968.) Paper presented by the Lesotho participants to the 8th Management Training Course, held in Ghana, August, 1968. 4 pp.

Historical background, recent difficultiss and current problems of consumer, producer, and credit societies are described.

5. CAPITAL AND CREDIT

WALLMAN Sandra
LES 501
The Farmech Scheme, Lesotho. ("African Affairs", London, April, 1968, pp 111-117.)

An experiment in farm credit, and the reasons for its initial check and eventual success, are described.

9. MARKETING/CONSUMPTION

BIGGS H C
LES 901
Report on the marketing of agricultural and livestock produce in Basutoland. (London, Ministry of Overseas Development, 1965.) 149 pp.

The report (following a visit from September to December 1964) describes existing policies and arrangements for marketing of wool, mohair, cattle, hides and skins, maize, wheat, sorghum, peas, and beans. The role of the co-operative movement is examined, as well as government intervention in licensing, transport and communications. Recommendations are made on the marketing of wool and mohair, cattle, hides and skins, and grain. Additional powers should be given to the Registrar of Co-operative Societies with a view to securing improved financial management and financing co-operatives.

MADAGASCAR 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE MALGACHE, COMMISARIAT GENERAL AU PLAN. Plan quinquennal
MAD 101
1964-1968. (Tananarive, 1964) 254 pp (P). (Five-year Development Plan 1964-1968.)

The agricultural section of the Plan is contained in Chapter III (pp 45-84).

REPUBLIQUE MALGACHE, MINISTERE DE L'AGRICULTURE ET DU PAYSANNAT.
MAD 102
Modifications proposées pour la mise en oeuvre du plan quinquennal 1964-1968. (Proposed amendments to the implementation of the 1964-68 Five-Year Plan.) (Tananarive, 1964) 4 Vols.

Vol.1 (36 pp) Investments in groundnuts; Vol.2 (20 pp) Investments in cotton; Vol.3 (45 pp) Establishing coconut production on an industrial scale; Vol.4 (89 pp) Investments in paddy.

HANCE W A
MAD 103
African economic development. (New York, Praeger, 1967 (revised edition)/Council on Foreign Relations) 326 pp (P).

Chapter 7 (pp 211-241), Madagascar and Tropical Africa - similarities and contrasts, gives a general description of the Malagasy economy.

BERNARD A
MAD 104
Essai d'établissement d'un tableau d'échanges inter-industriels à partir d'une enquête SEMA (1962) sur les entreprises industrielles à Madagascar. (Attempt to draw up a table of inter-industry exchanges on the basis of a 1962 SEMA survey of industrial enterprises in Madagascar.) (Tananarive, ORSTOM, 1965) 93 pp.

Although not a statistically valid sample most of the enterprises of any importance in existence at the time in each of Madagascar's six regions were included in the survey. The author has made use of 221 out of the 300 individual dossiers completed on which to base his Leontieff matrix. He has made estimates of inputs (distinguishing those internal and external to each region) and of value added for each sector; of intermediate consumption, by region; of inter-regional exchanges; and of inputs from the overseas sector. The domestic sectors are: food, drink, and tobacco (sub-divided into rice, oil, bakery, drink other than wine, tobacco, miscellaneous food, starch, betsabetsa, coffee, conserves, sugar, vanilla, and wine), textiles, construction, chemicals, wood, tiles, machinery, and printing.

The main conclusions establish (a) a significant inter-industry (-sectoral) intra-regional intermediate consumption; (b) very insignificant inter-regional exchange of raw materials and industrial products; (c) a significant degree of intermediate consumption of imported secondary products; and (d) very insignificant intra- and inter-regional exchanges of secondary products, throwing into relief the activity of the few industrial firms involved in inter-sectoral exchanges of those products.

ADINE N
MAD 105
L'éxecution du plan agricole 1964-1967. (Carrying out the agricultural plan 1964-1967.) ("Revue du Madagascar", Tananarive, 1967, No.39-40, pp 39-60.)

Achievements and shortfalls in production and investment to the end of 1966, and estimates for 1967.

MADAGASCAR, MINISTERE DES FINANCES ET DU COMMERCE. Enquête agricole.
MAD 106
(Survey of agriculture.) (Tananarive, Imprimerie Nationale, 1966) 101 pp (P).

Results of a two-stage random sample survey undertaken in 1961/62, covering the demography of the agricultural population, structure of holdings, livestock population, implements, methods of cultivation, and areas of crops.

DUMONT R
MAD 107
Evolution des campagnes malgaches. Quelques problèmes essentiels d'orientation et de modernisation de l'agriculture malgache. (Rural change in Madagascar. Some fundamental problems in the development and modernisation of Malagasy agriculture.) (Tananarive, Imprimérie Officielle, 1959) 235 pp (P).

Provides a valuable background to the developments which have occurred during the past decade.

RUTHENBERG H
MAD 108
Ansätze und Hindernisse der weiteren landwirtschaftlichen Entwicklung in Madagascar. (Beginnings and obstacles to further agricultural development in Madagascar.) ("Zeitschrift für ausländische Landwirtschaft", Frankfurt/Main, 1963, No.1, pp 18-59.)

Agricultural conditions and land use are described and attempts so far made to increase production critically examined.

PAUTARD J
MAD 109
Possibilités de dynamisme interne dans l'agriculture malgache. (The prospects for growth within Malagasy agriculture.) (In "Economies et sociétés", "Cahiers de l'ISEA", Paris, 1967,

No.2, pp 87-104.)

A general assessment of the current situation.

HESELTINE N
MAD 110
La planification agricole. Rapport au gouvernement. (Report to the government on planning in agriculture.) (Rome, FAO, 1967) UNDP Report, TA 2297, 18 pp.

Recommendations on national and regional planning and on reforms of the agricultural sector.

HESELTINE N
MAD 111
Administrative structures and the implementation of development plans. ("Journal of Administration Overseas", London, 1967, No.2, pp 75-84.)

A comparison between local administration of rural development plans in Madagascar and Zambia. (Tropical Abstracts q1478/1967.)

ROUVEYRAN J C
MAD 112
Problèmes méthodologiques de la planification agricole dans les économies en voie de développement à prépondérance agricole (l'exemple de Madagascar). (Problems of planning methodology in preponderantly agricultural developing countries. The example of Madagascar.) ("Cahiers de l'ISEA", Paris, 1965, No.160, pp 253-287.)

A critical examination of methodology employed, and constraints involved (including inadequate statistical data) in Madagascar, and of planning methods in developing countries in general. These should be related to the quality of the basic material available. In first plans it is usually best to take only one or two of the better known regions, making short-term plans for them rather than attempting to draw up an aggregate plan. Even when the stage of having a national guiding plan is reached it should be short-term. The quantitative aspects of an overall plan can be gradually stepped up.

2. REGIONAL STUDIES

ANON
MAD 201
Etude des conditions socio-économiques de développement régional. (Study of the social and economic conditions for regional development.) (Paris, CINAM, 1962) 5 Vols.

Vol.1 (301 pp) Plateau regions; Vol.2 (418 pp) Western Regions; Vol.3 (317 pp) Eastern coastal regions; Vol.4 (125 pp) Annexe for North Eastern region: the banana-growing valleys; Vol.5 (223 pp) Summary.

ANON
MAD 202
Projets régionaux d'intervention agricole: Befandriana, Mandritsara, Manja et Androy. Note liminaire. (Regional development plans for agriculture. Marginal note.) (Paris, BDPA, 1965) 22 pp.

A brief assessment of the factors and problems common to all four regions, for which detailed development plans have been worked out separately.

ROBBE E _et al_
MAD 203
Projets régionaux d'intervention agricole. (Regional development programmes for agriculture.) (Paris, BDPA, 1965).

Vol.1 (198 pp) Mandritsara and North Befandriana; Vol.2 (206 pp) Manja. An inventory of physical, human, and economic resources, and an investment plan for their development.

ANON
MAD 204
Etude de mise en valeur et de colonisation de la région du Moyen Ouest. Province de Tananarive. (Study for the agricultural development and colonisation of the Middle West - Tananarive province.) (Paris, BDPA, 1965) 3 vols. 376 pp.

Proposals for a rural resettlement scheme for migrants in an underpopulated region.

BUISSON M
MAD 205
Projet de développement de la région du Moyen-Ouest de Madagascar. (Development plan for the Middle West region of Madagascar.) Paris, BDPA, 1966) 98 pp.

One of several contributions to the solution of the complicated social and agro-economic problems of the region.

MILLOT F
MAD 206
Etude des possibilités de mise en valeur du Moyen-Ouest. (Outlook for the agricultural development of the Middle West.) (Paris, BDPA, 1966) 317 pp.

A more detailed examination of the agricultural and, mainly at farm level, economic aspects of this regional development scheme, without particular reference to the social implications of the complementary resettlement project.

MARCHAL J Y
MAD 207
Antanéty-Ambohidava: monographie d'un terroir du moyen-ouest malgache. (Description of the economic life of a hamlet in the middle-west area of Madagascar: Antanéty-Ambohidava.) (Tananarive, ORSTOM, 1967) 127 pp.

Rice is at present the sole source of income, but it is proposed to introduce maize and to improve output both of the rice-fields and the surrounding hills (tanety).

ANON
MAD 208
Le terroir de Tsarahonenana: introduction à la région d'Ambohibary (Vakinankarata). (The hamlet of Tsarahonenana: introduction to the d'Ambohibary region (Vakinankarata).) (Tananarive, ORSTOM, 1967).

A study made in 1965/66 of plain villages, and the upland farming associated with them, in a central mountain region and the plain within it.

BIED-CHARRETON M *et al*
MAD 209
Plaine de Tananarive. Démographie. Structure fonçière. Structure des exploitations. (Demography, structure of property and structure of agricultural holdings in the Tananarive Plain.) (Tananarive, ORSTOM, 1967.)

Vol.1 (73 pp and Annexes) Summary; Vol.2 (190 pp) Demography and employment; population movements; Vol.3 (184 pp) Farm equipment; types of tenure; land acquisition; methods of cultivation; Vol.4 Maps. A descriptive analysis of the area as a basis for future planning.

BIED-CHARRETON M
MAD 210
Le canton de Bétafo et le village d'Anjazajotsy. (The Bétafo area and the village of Anjazajotsy.) (Tananarive, ORSTOM, 1967) 141 pp. (Also reprinted in "Bulletin de Madagascar", Tananarive, Nos. 265 and 266/67, 1968, 111 pp (P).)

Problems of agricultural development and of achieving a balance between population and resources in a heavily populated area.

DANDOY G
MAD 211
Vohibary, terroir du pays Betsimisaraka. (Vohibary, a hamlet of Betsimisaraka.) (Tananarive, ORSTOM, 1967) 108 pp and Annexes.

Descriptive analysis of a village (in the north-east coastal area, 100 km. north of Tamatave and 40 km. east of Fénérive) and its surrounding land. Economic assessment of development possibilities, and obstacles to development.

VON BLANCKENBURG P *et al*
MAD 212
The Samangoky Settlement Scheme on the Lower Mangoky River in SW Madagascar. (An appraisal for the world

food program.) (Berlin, Institut für ausländischer Landwirtschaft der Technischen Universität Berlin, undated) 52 pp.

A review of the Settlement Scheme since 1961. The cultivated irrigated area, which it is planned to expand to 10,000 ha., extended by 1965/66 to 1,100 ha., with 801 farms.

ROBBE E *et al*
MAD 213

Etude de la zone maritime de l'Androy. (Study of the Androy seaboard area.) (Paris, BDPA, 1965) 183 pp.

An inventory of physical, human, and economic resources of an area in the southern tip of Madagascar, and proposals for their development.

GUERIN M
MAD 214

Une expérience de modernisation rurale dans l'extrême sud de Madagascar. (An experiment in rural modernisation in the extreme south of Madagascar.) ("Cahiers de l'Institut de Science Economique Appliquée", Paris, Série V, 1964, No.1, pp 227-255.)

See MAD 1118.

BRUYERE R & JANNAUD G
MAD 215

Etude agronomique du périmètre d'aménagement de la plaine de l'Onive (Madagascar). (Agronomic study of the Onive Plain development area.) ("L'Agronomie Tropicale", Paris, 1964, No.5, pp 383-412.)

Proposals are made for the improvement of crop and livestock production. (WAERSA 1262/1965.)

ANON
MAD 216

La Société Malgache d'Aménagement du Lac Aloatra (SOMALAC). (The Lake Aloatra Development Company.) (Paris, SCET/COOP, 1967) 37 pp.

A description of the Company's constitution, aims, financing, and achievements to date.

MARNAY P
MAD 217

La SOMALAC. (The SOMALAC.) (Paris, SEDES, 1968/SEAE) 2 vols. 220 pp.

A more detailed description of the Company's activities: works of infrastructure, irrigation schemes, land consolidation, and development of agricultural production. Problems of training and extension, social and psychological effects of the development projects on the population, credit for equipment and inputs, and the organisation of those receiving grants of land, are all analysed. The study concludes with a critical assessment of the Company's operations to date and of their foreseeable results in the near future.

3. LAND TENURE

ANON
MAD 301

Etude de structure fonçière dans l'aire de mise en valeur rurale de Morondava. (Study of farm structure in the Morondava rural development area.) (Paris, BDPA, 1966) 167 pp.

A sample of 153 holdings, average size 3.6 ha., occupying 710 persons. The majority of occupiers are owners. Those who are tenants are share-croppers. Aspects of land law and custom, inheritance, registration of ownership, and valuation are examined, and special study made of the shift from collective (family/village) to individual rights and ownership; of reclamation of state-owned fallows; and of the influence of ethnic differences.

LOUZOUN M G
MAD 302
Le remembrement au Lac Alaotra. (Land consolidation at Lake Alaotra.) ("Terre-Malgache", Tananarive, 1967, No.2, pp 101-127.)

The difficulties encountered by SOMALAC in improving productivity of rice fields are discussed in considerable detail. (Tropical Abstracts r427/1968.)

KOERNER F
MAD 303
Les types de sociétés agricole privées à Madagascar: formation, structure, et propriétés. (Types of private agricultural company in Madagascar: their foundation, present structure, and estates.) ("Cahiers d'Outre-Mer", Bordeaux, 1968, No.83, pp 276-297.)

A description of the development of French expatriate companies (some originating from large concessions of land made by the former Malagasy monarchy to settlers in the mid-19th century) before and since World War I, their present ownership, and their relationship with parent and associated companies in France. The extent of their holdings of land and plans is stated: large estates, especially in the North-West, producing sisal, cotton, and sugar; starch factories and rice-mills in the region of Lake Alaotra, &c. No new major company has been founded since 1950. The companies' activities have been little affected by independence. Uncultivated land must be surrendered, but the former owners may retain some lien on it by forming new enterprises with state participation ('sociétés mixtes') to develop it. These have not been uniformly successful (Somasak, Somalac, Samangoky, &c. See MAD 212, MAD 215, MAD 217 and MAD 1111).

4. CO-OPERATIVE FORMS OF PRODUCTION

BITARD J
MAD 401
Le mouvement coopératif à Madagascar: bilan et perspectives. (The co-operative movement in Madagascar: situation and outlook.) (Paris, IFAC, 1964) 37 pp.

A certain amount of government financial assistance will be needed to the co-operative movement in Madagascar, but it will remain essentially a private organisation.

RAWYER F
MAD 402
Développement des coopératives agricoles et du crédit rural. Rapport au gouvernement. (Report to the government on agricultural co-operatives and rural credit.) (Rome, FAO, 1967) 29 pp.

Includes recommendations on operational management and public administration of co-operatives, and on co-operative marketing.

6. LIVESTOCK PRODUCTION

LACROUTS M et al
MAD 601
Etude des problèmes posés par l'élevage et la commercialisation du bétail et de la viande à Madagascar. (Study of problems connected with the raising and marketing of cattle and meat in Madagascar.) (Paris, SEDES, 1962) 2 Vols. 287 pp (P).

Vol.I gives an analytical picture. Vol.2 examines future possibilities for the domestic and export markets.

MANDON A et al
MAD 602
Production et commercialisation de la viande de boeuf à Madagascar. (Production and marketing of beef in Madagascar.) (Tananarive, Ministère d'Etat chargé de l'Agriculture, de l'Expansion Rurale et du Ravitaillement, 1966) 2 vols. 76 pp and 112 pp.

Technical, social, and traditional marketing obstacles to the expansion of meat production from indigenous zebu cattle are considered, and an investment plan, by regions, proposed, including extension services (for stock and pasture improvement), markets, and abattoirs.

GRANIER P
MAD 603

Amélioration de l'élevage semi-intensif dans le Moyen-Ouest de Madagascar. (Improvements in semi-intensive cattle-raising in the Middle West of Madagascar.) ("Revue d'élevage et de médecine vétérinaire", Paris, 1965, No.3, pp 339-348.)

Experiments show that enough forage can, by efficient pasture management and conservation, be provided for all-year-round milk production. No attempt has been made so far as costing.

BUCK B H
MAD 604

Où en est l'élevage à Madagascar? Quelles sont ses possibilités d'avenir? (Livestock raising in Madagascar and its future possibilities.) ("Terre-Malagache" ("Tany Malagasy"), Tananarive, 1967, No.1, pp 97-136.)

A useful summary of the livestock situation, of production targets, and of obstacles to extension.

MONGODIN B
MAD 605

Le développement de l'élevage dans le périmètre de Mandoto (Moyen-Ouest de Madagascar). (Development of livestock production in the Mandota perimeter, Middle-West Madagascar.) (Maisons-Alfort, IEMVPT, 1966).

A mainly technical consideration of obstacles to development, and proposals for overcoming them.

ROBINET M
MAD 606

Problèmes de production animale à Madagscar (mission effectuée du 16.6. au 10.7.67.) (Problems of livestock production in Madagascar (mission carried out 16.6 - 10.7.67.)) (Paris, SEAE, 1967/République Malgache, Ministère d'Etat chargé de l'Agriculture, de l'Expansion Rurale et du Ravitaillement) 132 pp and Annexes.

Statistics of numbers and output (including those presented by ELAKAT (see MAD 607 and MAD 608)) are critically examined. The situation for beef, pig meat, mohair (goats), mutton, milk, poultry meat, eggs, and honey and fish production is described. Official policy, planning, and livestock projects (including intensive cattle-raising in the Majunga region) are examined. The author stresses the urgent need for family budget studies, and projections for urban demand for milk (which is mainly institutional and expatriate). Local milk production should, in his view, be a subordinate activity to calf-rearing. Official policy should concentrate on getting the best out of local climatic conditions particularly well suited to meat production. The combination of family farming, ranching, and intensive beef units could in theory make available 10,000 tons of meat for export.

ANON
MAD 607

Société pour la mise en valeur et la commercialisation du bétail, 'Vacomby'. Etude de la commercialisation du bétail de la province de Majunga (Madagascar). (The 'Vacomby' livestock production and marketing company. A study of livestock marketing in Majunga province.) (Brussels, ELAKAT, 1966/Tananarive, Société Nationale d'Investissement.)

Part 1 (236 pp) discusses the activities of the enterprise which would be 'upstream' from its abattoir; Part 2 (128 pp) those which would be 'downstream'.

ANON
MAD 608

Société pour la mise en valeur et la commercialisation du bétail, 'Vacomby'. Possibilité de création d'un "élevage industriel à Madagascar. Etude de rentabilité. (The 'Vacomby' livestock production and marketing company. The scope for setting up a large-scale cattle-raising enterprise in Madagascar. An economic assessment.) (Brussels, ELAKAT, 1966/Tananarive, Société Nationale d'Investissement) 124 pp.

REPOBLIKA MALAGASY, MINISTERE DE L'AGRICULTURE, DE L'EXPANSION RURALE
MAD 609 ET DU RAVITAILLEMENT. Les grandes opérations: programme 1968-1969. (Major projects: 1968-1969 programme.) (Tananarive BDPA, 1967) 279 pp and maps.

A listing of major projects, covering oil palm, coconut, coffee, banana, cotton, cashew nuts, and silk production, with planned investments. Includes schemes for 9 ranches, an intensive fattening unit, and 2 refrigerated abattoirs.

HARDEL D
MAD 610
Analyse économique d'exploitations agricole de l'Imérina. (Production analysis of farms in the Imérina area.) (Tananarive, ORSTOM, 1968) 104 pp.

A comparative analysis of gross and net farm incomes on 48 farms divided into three groups: 27 on which rice and other subsistence crops were combined with production of milk for cash; 12 on which cash income was derived from beef; and 9 purely subsistence holdings. Average net profit was found to be highest in the first group, but with a very wide variation (over 250 per cent of mean) between best and worst. In the second group the average was 25 per cent lower, though within a much narrower range, the value of tenant's capital employed being 20 per cent higher. Return to factors of production was in fact generally low on all the farms. The author stresses the importance of technical improvements to ensure less variable output (in quality and quantity), and of the future need for a guarantee of economic stability sufficient to stimulate both investment and higher output. At present the farmer has few grounds for confidence in his economic environment.

BABEL E
MAD 611
La viande de boeuf et le lait dans le bilan alimentaire malgache. (Beef and milk in Malagasy food balances.) ("Bulletin de Madagascar", Tananarive, 1961, No.181, pp 477-491.)

GUERAULT A M & BIRON P
MAD 612
Les problèmes laitiers à Madagascar. (Dairy problems in Madagascar.) (Rome, FAO, 1961) ETPA Report 1373, 48 pp.

Processing, production and management.

HARDEL D
MAD 613
L'économie laitière: essai sur l'intégration d'une production agricole. (Economics of dairy farming. A study of integrating production.) (Tananarive, ORSTOM, 1968) 3 vols, 247 pp.

In a previous study older farmers with larger holdings were found to have stuck to milk production despite falling or fluctuating incomes, whereas younger more go-ahead ones were diversifying production on mainly smaller holdings in order to obtain higher incomes. They were thus influenced by factors exogenous to their environment. The present study attempts to identify these influences on milk producers by analysing production on dairy farms supplying the Tan creamery. In order to obtain level supplies of even quality and ensure a regular output of dairy products the creamery was obliged to assume a direct interest in its suppliers' production problems. The author shows that in fact, owing to faulty management, it failed to appreciate the need for co-ordinating either milk supplies or the marketing of its output.

BORGET M
MAD 614
Production et cultures fourragères à Madagascar. Rapport de mission (mai-juin, 1962). (Green forage production in Madagascar. Report on a mission May-June, 1962.) (Paris, IRAT, 1962) 106 pp.

A mainly technical report on current experiments in, and future possibilities for, the use of green forage in beef and milk production in a number of different areas.

RAZAKOBANA F
MAD 615
Les possibilités d'amélioration des pâturages malgasy. (Possibilities of improving pastures in Madagascar.) ("L'Agronomie tropicale", Paris, 1967, No.5, pp 496-503.)

A mainly technical examination of the problems of producing and conserving forage for cattle-raising. Effects on beef and milk output are not considered.

GRANIER P *et al*
MAD 616
Bilan de l'exploitation fourragère d'un bas-fond aménagé pour la production laitière. (The economics of forage production in a swamp area reclaimed for milk production.) (Terre-Malgache") ("Tany Malagasy"), Tananarive, 1967, No.1, pp 255-269.)

Intensive production of green forage off irrigated temporary leys can make a considerable contribution to all-year-round milk production on mixed dry-land and irrigated holdings.

7. CROP PRODUCTION

REPOBLIKA MALAGASY, MINISTERE DE L'AGRICULTURE, DE L'EXPANSION RURALE ET DU RAVITAILLEMENT.
MAD 701
Les grandes opérations: programme 1968-1969. (Major projects: 1968-1969 programme.) (Tananarive, BDPA, 1967) 279 pp and maps.

A listing of major projects, covering oil palm, coconut, coffee, banana, cotton, cashew nuts, and silk production, with planned investments.

MAYER & CHABROLIN .R
MAD 702
Programme de développement de la production de riz à Madagascar. Rapport, Annexes. Note de Synthèse. (Development programme for rice production in Madagascar. Report, Annexes, and Summary.) (Paris, SATEC, 1966/Repoblika Malagasy, Ministère d'Etat chargé de l'Agriculture, de l'Expansion rurale et du Ravitaillement) 281 pp.

Technical and economic aspects are examined of a programme (covering eleven different zones) to increase output of rice by 400,000 tons. Its capital/output ratio would, in the authors' view, prove satisfactory, and it would substantially assist Madagascar's trade balance by a net saving on imports of about FMG 8.0 bn.

REPOBLIKA MALAGASY, MINISTERE D'ETAT CHARGE DE L'AGRICULTURE, DE L'EXPANSION RURALE ET DU RAVITAILLEMENT.
MAD 703
Programme supplémentaire de développement de la productivité rizicole à Madagascar. (Additional programme for developing productivity in rice-growing in Madagascar.) (Tananarive, 1966) 4 Vols.

Vol.1 (35 pp) General argument; Vol.2 (10 pp) Regional projects; Vol.3 (56 pp) Technical aspects and operational programme; Vol.4 Summary. Project submitted bo the EEC Commission for increasing output of rice by 400,000 tons.

MÜLLER J O
MAD 704
Die Förderung der Reisproduktion in Madagascar. Bericht über ein Schwerpunktprogram mit Mitteln des Europaïschen Entwicklungsfonds. (Expansion of rice production in Madagascar. Report on a crash programme financed by the European Development Fund.) (Groupement pour l'Opération Productivité Rizicole, GOPR.) (Göttingen, Institut für Ausländische Landwirtschaft an der Universität, 1967) 27 pp.

Critical description of the early stages of an intensive campaign of extension work among peasant smallholders.

SCHMANDT L
MAD 705
Opération de productivité et crédit agricole. Mission Madagascar, sept.-oct. 1966. (The scheme for raising productivity in the rice sector and the question of agricultural credit.) (Paris, CCCE,?1967) 60 pp.

DUFOURNET R et al
MAD 706
Récolte mécanique du riz dans la région du lac Alaotra. (Mechanised rice-harvesting in the Lake Alaotra region.) (Supplement to "L'Agronomie Tropicale", Paris, 1961, No.3, pp 101-1o8.)

Comparative costs of production for mechanised and traditional methods of harvesting are given.

DUFOURNET R
MAD 707
Intensification des techniques culturales en rizières en vue d'obtenir les rendements maxima. (Intensifying techniques of rice-cultivation in order to obtain maximum yields.) ("L'Agronomie Tropicale", Paris, 1966, No.4, pp 468-488.)

Adoption of the techniques reviewed here should, by giving an average yield of 20 q/ha. (16 cwt/acre), enable the planned target of 1.8 mn. tons of paddy a year to be reached, and even exceeded.

RABE A H
MAD 708
Der Ackerbau auf der Insel Madagaskar unter besonderer Berücksichtigung der Reiskultur. (Crop production in Madagascar with special reference to rice-growing.) (Munich, Ifo-Institut für Wirtschaftsforschung, 1965) 346 pp.

PAIN Y
MAD 709
Un centre de riziculture mecanisée au lac Alaotra. (A centre for mechanised rice-growing at Lake Alaotra.) (IRAM, Station Agricole du Lac Alaotra, 1968) 64 pp.

Description of the Compagnie Générale de Madagascar's 1,000 ha. of wholly mechanised irrigated rice, 300 ha. of dryland rice, and 200 ha. of cassava. The company has 1,000 head of cattle, and mills its annual output of 3,500 tons of rice in its own mill, which has a capacity of 7,000 tons.

ANON
MAD 710
Etude préliminaire d'implantation d'un réseau de stockage du paddy à Madagascar. (Preliminary study on setting up a paddy storage network in Madagascar.) (Paris, BDPA/SCET (COOP), 1964) 112 pp.

Technical considerations and proposals for investment and government action.

PRALORAN J C et al
MAD 711
L'agrumiculture sur les Hauts Plateaux malgaches. Projet d'un plan d'implantation et de développement. (Proposal for establishing and developing citrus production on the High Plateaux in Madagascar.) (Paris, BDPA/IFAC, 1965) 5 vols, 463 pp and maps.

An exhaustive enquiry into the possibilities of introducing commercial citrus production for export.

ANON
MAD 712
Culture du ricin dans le sud de Madagascar et perspectives de développement. (Castor seed production in southern Madagascar and prospects for further development.) (Paris, BDPA, 1965) 17 pp.

Present production is on a small scale, but increasing (800 ha. in 1965). In order to reach a total output of 5,000 tons, which could be achieved by 1970, and would be the minimum to justify the setting up of a crushing plant locally, an area of 2,500 ha. would be required - or of 7,000 ha. if no insecticides are used.

BOSCH J & PETITJEAN B Aspects du marché de la vanille. (Aspects of
MAD 713 the vanilla market.) ("Terre-Malagache", Tananarive, 1968, No.3, pp 47-76.)

Present and future production problems, market outlets and marketing policies are discussed. Madagascar, with more than 40,000 planters, is the world's largest producer. (WAERSA 2355/1968.)

CHAMPION J Etude des zones favorables à la culture de la banane
MAD 714 d'exportation à Madagascar. (Study of zones in Madagascar suitable to banana-growing for export.) (Paris, IFAC, 1965, 2 vols. 51 pp and 26 pp.

Present (1965) output is too small to provide regular shipments. The report reviews the technical possibilities. Substantial investment would be required to achieve a national output of 75,000 tons a year by 1969, and of 100-120,000 tons a year by 1972, the technical maximum under favourable conditions. Between 75,000 and 100,000 tons is the minimum.

MADAGASCAR: **MINISTERE DE L'AGRICULTURE ET DU PAYSANNAT.** Projet
MAD 715 d'amélioration de la structure de la caféiculture robusta. Ensemble du programme à repartir entre les différentes sources de financement. (Plan for improving the structure of robusta coffee production. The division of the programme according to various sources of finance.) (1965) 113 pp.

Present production conditions are described, together with an outline of proposed improvements in research, technical aid, extension services and marketing, and the means of financing them. Estimates of lower costs of production to be expected as a result of this action are given.

RAKOTO M Le sériciculture, un appoint de revenu pour le paysan
MAD 716 [illegible]ache. (Silk production, a source of additional income [illegible] the Malagasy farmer.) (Tananarive, Université de Madagascar, Ecole Nationale des Cadres, 1967) 64 pp (typescript).

A technical and economic assessment, and proposals for internal and export marketing.

ANON Projet de création d'une nuciculture industrielle dans la
MAD 717 région de Sambava. (Plan for establishing coconut production on an industrial scale in the Sambava region.) (Tananarive, IRHO, 1967/Repoblika Malagasy) 4 vols. and maps.

Vol.I (109 pp) summarises technical criteria for locating the project, and its economic aspects. Vol.II (50 pp) analyses present and future demand (to 1969) for vegetable oils, for both food and industrial purposes, in Madagascar. Vol.III (166 pp) Soil survey. Vol.IV (151 pp) considers the social and economic implications of project; its effect on farm income both individual and aggregate; its investment value; and the relative merits of two alternative proposals, for planting 1,200 hectares and planting 4,200 hectares.

ANON Brojet de développement du palmier à huile à Tamatave.
MAD 718 (Plan for developing oil palm plantations at Tamatave.) (Tananarive, IRHO, 1967/Repoblika Malagasy) 4 vols. and maps.

Vol.I (31 pp) General summary. Vol.II (102 pp) I. The Malagasy market for oils and fats. 2. Problems of management structure. 3. Social and economic study. Vol.III (65 pp) Soil survey. Vol.IV (94 pp) The pilot scheme. Vol.II, Parts 1 and 2 are identical with Vol.II of the Sambava plan., Part 3 is similar in scope to, but much briefer than, Vol.IV of the Sambava plan (MAD 717).

BIGONNEY M
MAD 719
Le palmier à huile et les perspectives de développement de l'élaeiculture à Madagascar. ("Terre-Malgache", ("Tany Malagasy") 1967, No.1, pp 221-232.)

After a doubtful start, successful trials now suggest that Madagascar could become a major world producer of oil palm products within the next 20 years.

DUFOURNET R & GREMILLET B
MAD 720
Mécanisation agricole dans la région du Lac Alaotra. (Mechanisation of agriculture in the Lake Alaotra region.) (Tananarive, ORSTOM-IRAM, 1958) 208 pp.

A study of the effects of mechanisation on yields. Part I deals with tractors, Part II with machinery.

DUFOURNET R *et al*
MAD 721
Problèmes d'utilisation des engrais minéraux sur les hauts plateaux de Madagascar. (Problems of fertiliser use on the high plateaux of Madagascar.) ("L'Agronomie Tropicale", Paris, 1964, No.4, pp 285-316.)

Results of experiments in fertiliser application to rice are given, and recommendations made.

9. MARKETING/CONSUMPTION

REPUBLIQUE MALGACHE, MINISTERE D'ETAT CHARGE DE L'ECONOMIE NATIONALE.
MAD 901
Analyse de la structure des prix et des circuits commerciaux internes. (Analysis of the structure of prices and of internal markets.) (Tananarive, CINAM, Dec.1962) 253 pp.

Part I describes existing commercial channels, indicating major abuses requiring reform. Part II lists merchanting costs, for a variety of agricultural exports and of industrial and agricultural imports (including flour, condensed milk and 'pasta').

FAO ECONOMIC ANALYSIS DIVISION.
MAD 902
Rapport du séminaire sur la commercialisation des produits agricoles. Tananarive, Madagascar, 8-20 nov. 1965. (Report on a seminar on the marketing of agricultural produce, 8th-20th November, 1965.) (Rome, FAO, 1967) 55 pp.

Economic aspects of agricultural marketing. Study of market network for rice paddy, lime beans, groundnuts, bananas, fruit and vegetables.

LACROUTS M *et al*
MAD 903
Etude des problèmes posés par l'élevage et la commercialisation du bétail et de la viande à Madagascar. (Study of problems connected with the raising and marketing of cattle and meat in Madagascar.) (Paris, SEDES, 1962) 2 vols., 287 pp (P).

For summary see MAD 601.

MADAGASCAR, MINISTERE DE L'AGRICULTURE, DE L'EXPANSION RURALE ET DU RAVITAILLEMENT.
MAD 904
Production et commercialisation de la viande de boeuf à Madagascar. (Production and marketing of beef in Madagascar.) (Tananarive, 1966) 3 vols.

Vol.1 Plan of operation; Vol.2 Economic policy for expansion defined; Vol.3 Fattening projects.

MANDON A *et al*
MAD 905
Production et commercialisation de la viande de boeuf à Madagascar. (Production and marketing of beef in Madagascar.) (Tananarive, Ministère d'Etat chargé de l'Agriculture, de l'Expansion Rurale, et du Ravitaillement,

1966) 2 vols. 76 pp and 112 pp.

For summary see MAD 602.

ANON
MAD 906
Etude sur le marché intérieur de viande de porc. (Internal market study on pigmeat.) (Paris, BDPA, 1962) 96 pp.

Supply and demand and market outlets and prices are analysed.

DURAN P
MAD 907
La consommation ostentatoire en milieu rural à Madagascar. (Conspicuous consumption in the Madagascar countryside.) ("L'Homme", Paris, 1967, No.2, pp 30-47.)

Although on the East coast there has recently been a tendency for marginal income from the banana export crop to be spent on western consumer durables, on the inland plateaux the new-rich still customarily spend their newly-acquired wealth in feasting their relations, putting up grandiose tombs, and, in some places, building themselves European-type houses with impressive facades but no floors or ceilings, in which they have no intention of living. Contrary to generally accepted theories of economic development little marginal income goes on improved diet, and industrial food products are of no interest.

FRANÇOIS P J
MAD 908
Budgets et alimentation des ménages ruraux en 1962. (Rural household budgets and nutrition in 1962.) (Paris, CINAM/SEAE/INSEE, 1968/République Malgache, Commisariat Général au Plan) 4 vols. (P).

Vol.1 (123 pp) Population data. General demographic information. Analysis of rural households by size, occupation of head of household, &c. Vol.2 (287 pp) Nutrition and food consumption habits. Social, religious ethnic, geographical, and seasonal influences on cooking and eating habits, and on quantities of food and fuel consumed, are analysed. Vol.3 (242 pp) Agricultural resources and family budgets. Part I itemises total local food resources, including export crops. Parts II & III give a detailed analysis of the results of the household budget survey of a sample of 5,100 households drawn from the rural population of Madagascar (estimated at 5.386 million in 1960). Vol.4 (47 pp) Summary.

10. PROCESSING INDUSTRIES

WENDLING H
MAD 1001
Etude de la valorisation industrielle des sous-produits du riz dans la République malgache. (Study of the industrial uses of rice by-products in the Malagasy Republic.) (Paris, SVMV, 1966) 143 pp.

An examination of future possibilities for the use of rice straw, chaff and bran as fertiliser, animal feed, fuel, paper paste, and for miscellaneous other purposes.

LACROUTS M
MAD 1002
Projet d'équipement de Madagascar en abattoirs frigorifiques. (Plan to equip Madagascar with refrigerated slaughterhouses.) (Paris, Ministère de la Coopération, 1963-64) 7 vols.

Vol.1 General remarks; Vols. 2 to 7 relate to individual plants.

ANON
MAD 1003
Le marché des aliments du bétail à Madagascar. (The market for compound feeding-stuffs in Madagascar.) (Tananarive, 1964) 221 pp).

A descriptive analysis of the present industry and of its local resources, and a consideration of technical and economic obstacles to their development.

WENDLING H
MAD 1004
Etude de la valorisation industrielle de la canne à sucre dans la République Malgache. (Study of the utilisation of industrial

by-products of sugar cane in the Malagasy Republic.) (Paris, SVMV, 1964) 124 pp.

Economic assessment of the investment, location, and market outlets required for a plant producing paper from bagasse.

HARDEL D
MAD 1005
Essai sur quelques types de relations agriculture-industrie à Madagascar. (Study of some types of relationship between agriculture and industry in Madagascar.) (Tananarive, ORSTOM, 1968) 126 pp and Annexes.

Part I describes the food industries in Ambalavola region in the south-east and Ambato-Boeni region in the north-west, and examines their attitude and action in face of irregular supplies, the uncertainty of producer reactions, and of seasonality and perishability of products. The fruit, vegetable, meat, and tomato processing industries are covered, together with textile production from imported jute and local 'paka'. Part II contains farm budget analysis and examines the sociological structure of the regions in order to establish the extent of the impact which the industries have made on farmers' cash incomes. This has so far been very small. But the farmer's way of life, however outwardly traditional, already in fact involves a whole section of his existence in the cash economy. It is stressed that only tentative conclusions can be drawn from a limited area and from limited data of supply and demand.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

OTTINO P
MAD 1101
Les économies paysannes malgache du Bas-Mangoky. (Peasant economies of the Lower Mangoky River region.) (Paris, Berger-Levrault, 1963) 373 pp (P).

Part 2 analyses marketing channels, particularly for peas. Part 3 considers incomes of the different population groups. Development plans must, in the author's view, take into account the particular characteristics of the area and of its people. (WAERSA 2870/1964.)

GILLAIN H
MAD 1102
Promotion paysanne à Madagscar. (Raising peasant output in Madagascar. ("Archives Internationales de la Coopération", Paris, 1962, No.8, pp 69-92.)

Personal experience of three years' extension work. In devising a farm model the rate of expansion of output aimed at may be modified in the light of existing living standards and of the relative demographic pressure in the area concerned. In the Marovoay plain, for instance, a rate of between 1 and 3 per cent per annum is sufficient and could be obtained merely by improving traditional rice-growing techniques. In Tananarive province, on the other hand, where the population is growing at double the rate, output must increase by 6 per cent, necessitating structural changes and more elaborate information, extension, and technical services.

DEZ M J
MAD 1103
Un des problèmes du développement rural: l'évolution des comportements. (A problem of rural development: changes in behaviour.) ("Bulletin de Madagascar", Tananarive, 1965, No.230, pp 589-641.)

An outline of peasant behaviour in face of mechanisation, new rural techniques, land improvement measures, etc. (WAERSA 973/1966.)

MOLLET A
MAD 1104
L'animation rurale à Madagascar. 'Animation rurale' in Madagascar.) ("Développement et civilisations", Paris, 1965, No.21, pp 10-24.)

'Animation rurale' in Madagascar takes the form of making the population aware of the socialist way of development, involving voluntary participation, chosen by the country at independence. (WAERSA 2959/1966.)

CHEVALLIER Geneviève & COLIN R L'animation à Madagascar. ('Animation
MAD 1105 in Madagascar.) (Paris, IRAM, 1967) 30 pp.

The development of 'animation rurale', with the assistance of IRAM, since 1961 is described, and future tasks outlined. Methods of training 'animateurs' and experiences of 'animation' in a number of rural communities are also described.

DEZ M J
MAD 1106
Un des problèmes du développement rural: la diffusion de la vulgarisation agricole (aperçus psycho-sociologiques). (The problem of agricultural extension in rural development from a psycho-sociological point of view.) ("Terre-Malgache" ("Tany Malagasy"), Tananarive, 1967, No.1, pp 41-70.)

GILLAIN M
MAD 1107
L'action de masse de vulgarisation rizicole sur les plateaux. (The large-scale extension campaign for rice-growing on the plateaux.) ("Travaux et Documents du Centre d'Etude Rurales", Tananarive, 1966, pp 1-11.)

A description of methods used.

TEISSONIERE R L L'évolution des organismes de paysannat à Madagascar
MAD 1108 depuis 1950. (The evolution of 'paysannat' structures in Madagascar since 1950.) ("Terre-Malgache", Tananarive, 1966, No.1, pp 27-40.)

A critical discussion of developments in rural development policy between 1950 and 1964, and how knowledge and experience obtained during this time could be best used during the 1964/68 development plan. (Tropical Abstracts r204/1968.)

ALTHABE G
MAD 1109
Progrès économique et communautés villageoises. (Economic progress and village communities.) ("Travaux et documents du Centre d'Etudes Rurales", Tananarive, 1966, pp 47-72.)

'Agents of progress' arriving from outside bring a message that often seems wholly irrelevant to the rhythms of village life. They should cease presenting themselves as wanting to turn the world upside down, and appear merely as bearers of certain techniques whose results can be adapted by the village community in its own way and to its own ends.

OTTINO P
MAD 1110
Les implications techniques et sociales d'une révolution agricole: le cas de la Sakay. (Technical and social conclusions of an agricultural revolution. The case of Sakay.) ("Cahiers de l'ISEA", Paris, 1964, No.145, pp 135-197.)

A survey of past and present trends in agricultural production. Changes in methods of animal breeding, which altered the use of land, have had a profound effect on village structures. (WAERSA 1420/1964.)

ROY G
MAD 1111
La Société malgache d'aménagements de la Sakay (SOMASAK). Bilan de quatre années d'action. (The Sakay development company of Madagascar (SOMASAK). Four years' experience.) (Tananarive, ORSTOM, 1965) 123 pp (P).

A critical examination of the shortcomings of an organisation which the author considers to have been faulty in conception and to have largely disregarded the social and psychological attitudes of the farmers whom it was designed to benefit.

ANON
MAD 1112
Etude des methodes de gestion du périmètre d'Andilamena. (Study of methods of farm management in the Andilamena 'périmètre'.) (Paris, BDPA, 1963) 101 pp.

Description of physical resources and farming methods in the area. Costs and returns are examined and proposals made for raising net farm incomes. Eleven similar micro-economic studies for other 'périmètres' were published in the same year.

MONTENEZ J & HENRY P
MAD 1113

Essai méthodoloqique sur les effets économiques et sociologiques dus à l'aménagement de la vallée du Bas-Mangoky. (A methodological examination of the economic and social effects of rural development planning in the Lower Mangoky Valley.) (Paris, SEDES, 1965/Direction générale à la Recherche Scitneifique et Technique.) (Vol.II of "Le développement rural dans les pays d'Afrique noire d'expression française" (Rural development in the French-speaking countries of black Africa) 77 pp. See AFR 113.

The authors examine the effects at the level of the individual holding of the SAMANGOKY development company, as well as on the national economy.

DOUMENGE F & BATTISTINI R
MAD 1114

La mise en valeur du delta du Mangoky. (The development of the Mangoky River delta.) ("Les Cahiers d'outre-Mer", Bordeaux, 1966, No.74, pp 144-173.)

A critical appraisal of a major experimental scheme for the resettlement of the agricultural population on irrigated smallholdings producing mainly rice and cotton.

MARNAY P
MAD 1115

Etudes socio-économiques pour l'opération de productivité rizicole dans la préfecture de Farafangana. (Sociological and economic study for the rice-growing productivity campaign in the Farafangana prefecture.) (Paris, SATEC, 1966/ Repoblika Malagasy, Ministère d'Etat chargé de l'Agriculture, de l'Expansion rurale et du Ravitaillement) 92 pp.

Demographic, ethnic, and sociological analysis of a region of south-eastern Madagascar. The importance of a sociological approach to the eventual development of a subsistence economy rather than the application of rational economic criteria alone is stressed.

SORDOILLET R
MAD 1116

Comité d'Expansion Economique de Marovoay (COMEMA). Programme d'études, 1 64. (Studies carried out for the Marovoay Economic Expansion Committee (COMEMA) 1964.) (Paris, SATEC, 1965/ République Malgache, Province de Majunga) 5 vols.

Vol.1 (21 pp and Annexes) Irrigation studies; Vol.2 (67 pp) Sociological and economic studies; Vol.3 (35 pp) Marketing of paddy; Vol.4 (60 pp) Financial aspects; Vol.5 (23 pp) Investment forecasts for the 1966-69 programme of operations. Maps and soil survey.

CHAPUIS E
MAD 1117

Conditionnement socio-culturel de l'économie dans la région de Tuléar. (Social and cultural influences on the economy in the Tuléar area.) ("Cahiers de l'ISEA", Paris, 1964, No.7, pp 199-225.)

The importance of psychological and sociological factors in carrying out economic development schemes is stressed.

GUERIN M
MAD 1118

Une expérience de modernisation rurale dans l'extrême sud du Madagascar. (An experiment in rural modernisation in the extreme south of Madagascar.) (Paris, ISEA, 1964) 29 pp (P).

The author concludes that 'modernisation should be complete' but carried out gradually taking into account the needs and customs of the traditional system. If these factors are not observed, the whole operation may be brought to a standstill. (WAERSA 1421/1965.)

ROUVEYRAN J C
MAD 1119

Questionnaire d'exploitation agricole adapté à Madagascar et application de ce questionnaire en pays Tsimihety. (Farming questionnaire adapted for Madagascar and its application in the Tsimihety region.) ("Terre-Malgache", 1967, No.2, pp 55-100.)

The questionnaire covered social, technical, financial and economic aspects of a single farm. These are analysed, and the method of approach to the peasant farmer discussed. (WAERSA 3011/1968.)

12. RURAL/URBAN RELATIONS

POIRIER J
MAD 1201

Aspects de l'urbanisation à Madagascar: les villes malgaches et la population urbaine. (Aspects of urban growth in Madagascar: Malagasy towns and the urban population.) ("Civilisations", Brussels, 1968, No.1, pp 80-112, No.2, pp 285-298.) (English summary.)

A general consideration of urban problems. Since the beginning of decolonisation in 1958 the economic importance of provincial towns, particularly those of more than 10,000 inhabitants, has been steadily declining, while their population has been constantly increasing. All towns are split up by patches of cultivated land. Many are polycentric.

MALI 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DU MALI, MINISTERE D'ETAT CHARGE DU PLAN ET DE LA COORDINATION DES AFFAIRES ECONOMIQUES ET FINANCIERES.
MAL 101

Rapport définitif de l'enquête agricole 1964-65. (Final report on the 1964-65 agricultural survey.) (Bamako, Service de la Statistique de la Comptabilité Nationale et de la Mécanographie, 1967) 95 pp.

Methodology is described, and findings include structure of agricultural population and of holdings, livestock numbers, crop areas and output, and numbers of implements.

BANQUE DE MALI
MAL 102

Problèmes posés par la production agricole et l'élevage en République du Mali. Journées d'information du Service du Crédit Agricole et de l'Equipement Rural. Bamako, déc. 1966. (Problems of crop production and livestock-raising in the Mali Republic. Report of seminar organised by the Agricultural Credit and Rural Equipment Services.) (Bamako, 1967) 100 pp.

Brief summaries of papers read, covering a wide variety of subjects, and of subsequent discussions: food crops, cotton, groundnuts, market-garden crops, tree crops, beef, pigmeat, poultry, and irrigation.

DUMONT R
MAL 103

Afrique Noire. Développement agricole. Reconversion de l'économie agricole: Guinée, Côte d'Ivoire, Mali. (The agricultural development of black Africa. Reconversion of the agrarian economy in Guinea, Ivory Coast and Mali.) (Paris, PUF, 1961) 212 pp (P).

A summary report of the main problems facing Mali in 1961 during the coming decade.

AMIN S
MAL 104
Trois expériences africaines de développement: le Mali, la Guinée et la Ghana. (Three African experiments in development: Mali, Guinea, and Ghana.) (Paris, PUF, 1965) 232 pp (P).

The section on Mali (pp 21-130) gives a historical sketch of the colonial period from 1928 and of the immediate post-independence period, concluding with a critical assessment of the 1961-1966 Five-Year Plan and of the methods used in drawing it up. See also GUI 101 for general summary.

KNÖPFEL D
MAL 105
Einige Probleme der Entwicklung der Landwirtschaft in der Republik Mali. (Some problems of agricultural development in the Republic of Mali.) ("Zeitschrift der Agrarökonomik", Berlin, 1966, No.12, pp 656-663.)

Proposed developments on co-operative lines both in production and marketing are described (WAERSA 2405/1967.)

BESSIS A C *et al*
MAL 106
Report of a mission for the study of problems and prospects in the rural development of Mali, Niger, and Upper Volta. (Addis Ababa, UN/ECA, 1966) 246 pp.

Parts I and II contain geo-physical, demographic, and social data and a general description of the countries' economies. Part III considers problems of crop and livestock production, especially milk and meat, of the structure of holdings, and of markets and prices. Part IV deals with social aspects: co-operatives, credit, extension services, transport, and community development. Part V discusses plans, and prospects, for economic development. The main conclusions and recommendations in Part V fall into three categories: (a) education, health, community development, and the training of extension workers and staff for co-operatives; (b) improvement of land tenure, consolidation of holdings, and resettlement schemes; and (c) methods of increasing investment and output in agriculture and diversifying production, modernisation of meat and milk production, and settlement of nomads.

2. REGIONAL STUDIES

DAVID M *et al*
MAL 201
Etude des possibilités de mise en valeur de la région de la Kolombine, du lac Magui et de la Térékol dans la République du Mali. (Study of possibilities for developing the Kolombine, Lake Magui, and Téréko regions of the Mali Republic.) (Paris, BDPA/De Bilt Grontmij NV, 1962) 69 pp and Annexes.

A preliminary assessment, with recommendations for further study in depth. About half the 200,000 ha. considered seems likely to prove suitable for agricultural development.

MAILLAND P *et al*
MAL 202
Programme général d'aménagement dans la Haute-Vallée du Niger. (General plan for developing the Upper Valley of the Niger.) (Paris, BDPA, 1966/République du Mali, Ministère du Développement) 2 vols. 308 pp.

An inventory of resources, assessment of the agricultural production and marketing system, and recommendations for their development. Estimated investment costs.

ANON
MAL 203
Phase préliminaire de l'opération de développement rural de la Haute-Vallée du Niger. Enquête démographique, agricole et culturale sur le périmètre du bassin versant du Barraro. (Preliminary phase of the Upper Niger Valley rural development plan. Demographic and agricultural survey of the Barraro Basin.) (Bamako, BDPA, 1966/République du Mali,

Ministère du Développement) 43 pp.

Results of a survey of an area of about 300 sq. km. 40 km. south of Bamako on the right bank of the Niger. The methodology of the survey is not described.

TURLIN H L
MAL 204
Opération régionale du Pays Dogon. (Regional plan for the Dogon country.) (Bamako, Bureau d'Etudes, Institut d'Economie Rurale, 1967) 3 Vols. 201 pp.

Description of an irrigation project, and an analysis of estimated benefits and marginal yields at both regional level and at that of the individual holding.

4. CO-OPERATIVE FORMS OF ENTERPRISE

LE FLOCH G
MAL 401
Le mouvement coopératif au Mali: bilan et perspectives. (The Mali co-operative movement: situation and outlook.) (Paris, BDPA, 1964) 34 pp.

Historical background and current developments. Co-operation in Mali, which is largely inspired by official socialist policies, has suffered from the lack of trained cadres at local level.

MERKER C
MAL 402
Rapport au gouvernement de la République du Mali sur le développement du mouvement coopératif. Formation comptable et gestion des coopératives. (Report to the Mali government on the development of the co-operative movement and on education in accounting and management.) (Geneva, ILO, 1967) 76 pp.

Description of present structure of, and government influence over, agricultural and other co-operatives. Recommendations on future organisation at national and local level, financing, and training in accountancy and management.

6. LIVESTOCK PRODUCTION

LACROUTS M & SARNIGUET J
MAL 601
Exploitation du cheptel bovin au Mail. (The utilisation of the Mali cattle herd.) (Paris, SEAE, 1965) 296 pp (P).

For summary see MAL 901.

ATABANI Y I & LEQUIEN J
MAL 602
Rapport de la Mission FAO/ECA sur les possibilités d'exploitation de la production laitière au Mali, nov.-déc. 1966. (Report of the FAO/ECA Mission on the prospects for developing dairy production in Mali.) (Rome, FAO, 1967) 41 pp.

Review of production methods, marketing and pricing. Recommendations for increasing output and for supply arrangements for five cities. Note on processed products.

THERET M A P
MAL 603
Rapport au Gouvernement du Mali sur l'enseignement de l'élevage. (Training in stock-raising in Mali.) (Rome, FAO, 1965) EPTA Report 1585, 24 pp.

All extension work for livestock, as in other sectors, is paralysed by lack of medium- and high-level leadership, and training of medium-level leaders should receive high priority. (WAERSA 1855/1966.)

7. CROP PRODUCTION

POULAIN J M Etude écononomique des cultures vivrières et de la culture
MAL 701 du mil au Mali. (Economic study of food crops and of millet produciion in Mali.) (Bamako, Ministère du Développement, 1965) 18 pp (typescript at BDPA).

Summary of extension workers' reports, giving estimated output by administrative circle both for family consumption and of marketable surpluses for five regions (comprising 34 circles). The intensity of millet production is represented by the ratio, area cultivated/total population. Reduction of area and increase of yields is the desirable objective.

COGNARD M *et al* Mil: programme quinquennal. (Five-year programme for
MAL 702 millet production.) (Bamako, Ministère du Développement, 1965) 81 pp.

Situation and outlook, including production targets, by region, for five years ahead. Estimated cereal balances, by region for 1963/64, and estimated year-to-year variations in output due to climate, are given.

POULAIN J M Etat actuel de la riziculture dans la moyenne vallée du
MAL 703 Niger. (Present state of rice cultivation in the Niger Valley.) (Bamako, Ministère du Développement, 1965) 22 pp (typescript at BDPA).

Technical progress reports on a number of irrigated areas which illustrate the achievements and difficulties of local extension workers.

ANON Rapport sur le prix de revient du riz de consommation.
MAL 704 Propositions de prix du paddy et du riz pour la campagne agricole 1966-67. (Report on the costs of rice for consumption. Proposed paddy and rice prices for the 1966/67 harvest season.) (Ségou, FAO, 1966) 40 pp.

A detailed analysis of production, distribution and marketing costs, and a consideration of various price effects.

DE FONT-REAULX H Amélioration et expansion de la riziculture au Mali.
MAL 705 Etude de la commercialisation du riz. (Improvement and expansion of rice production in Mali. Market study.) (Paris, BDPA/SCET (COOP), 1967/FAO) 93 pp.

The report gives a brief summary of situation and outlook in 1964-65 as regards supply, demand, and marketing. The influence of producer prices on the incomes of rice and cotton producers; of consumer prices for rice on the consumer's standard of living; and of marketing and processing costs on consumer prices of rice, are all examined. Official marketing arrangements for rice are considered and recommendations made.

DE FONT-REAULX H Etude des incitations comparées des cultures de riz
MAL 706 et de coton au niveau du paysan. (Study of comparative stimuli to rice or cotton production on peasant farmers.) (Ségou, FAO, 1966) 18 pp.

Criteria of choice are examined: gross and net returns, taking into account duration and intensity of physical effort, and capital requirements, including working capital.

DE FONT-REAULX H Rapport sur les conditions d'exportation du riz
MAL 707 malien vers la Côte d'Ivoire, le Ghana et le Sénégal. (Report on the export situation for Mali rice to Ivory Coast,

Ghana and Senegal.) (Ségou, FAO, 1966) 33 pp.

Potential demand in the three countries cannot at the moment be met from Mali supplies owing to shortcomings in the distributive system, as well as to the fact that the areas bordering Mali tend to be those with the smallest demand for imports.

COGNARD M & POULAIN J M Riziculture: programme quinquennal pour les
MAL 708 régions de Ségou et Mopti. (Five-year rice production programme for the Ségou and Mopti regions.) (Bamako, Ministère du Développement, 1966) 74 pp.

Report on achievements to date and future outlook for production and marketing.

GUILLAUME M Aperçus sur les possibilités de développement de la pro-
MAL 709 duction du sucre au Mali. (A look at the possibilities for developing sugar production in Mali.) ("L'Agronomie Tropicale", Paris, 1962, No.7-8, pp 492-503.)

A mainly technical survey to establish the most suitable production areas to meet a demand estimated at 25,000 tons in 1964/65, and therefore justifying the establishment of a local refinery.

MALI, MINISTERE DU DEVELOPPEMENT. Programme production de coton 1966-70.
MAL 710 (Cotton production programme 1966-1970.) (Bamako, 1965) 31 pp.

Annual acreage targets are given for each region, the total area under cotton being planned to increase from 70,000 ha. in 1966 to 100,000 ha. by 1970, and the total quantity marketed from 21,000 tons in 1965 to 52,000 tons in 1970. The proposed development of extension services, use of fertilisers and insecticides, and of animal traction is also spelled out by regions.

DE WILDE J C et al Experiences with agricultural development in tropical
MAL 711 Africa. (Baltimore, IBRD, 1967) Vol.II case studies, Mali: the development of peasant cotton production by the Compagnie Française pour le Développement des Fibres Textiles (CFDT) pp 301-336.

The success of the CFDT in raising output of cotton on peasant holdings over a period of more than ten years, making good the findings of its technical research by means of efficient extension services and marketing arrangements, is described. The reasons for the company's more limited achievements so far in the field of general agricultural development, including the introduction of mixed farming, are also analysed.

NASSE F Réalisation d'un programme de développement de la production
MAL 712 arachidière dans les cercles de Koulikoro et Banamba. (Outlines for a development plan for groundnut production in the Koulikoro and Banamba circles.) (Paris, BDPA, 1967) 2 vols. 223 pp.

An examination of present output, and necessary technical means for its expansion from 8,500 tons to about 34,000 tons a year (of which about 27,500 would be marketed), together with an assessment of the cost and yield of the investment involved.

ANON Actions de formation visant à développer la mécanisation de
MAL 713 l'agriculture au Mali (instruments à traction animale, matériels de défense des cultures). (Training for development of agricultural mechanisations in Mali - implements for draft animals and crop protection.) ("Machinisme agricole tropical", Antony, CEEMAT, 1966, No.14, pp 39-47.)

Organisation and first results of advisory work in use of draft animals for ploughing and other cultivators is described. (WAERSA 904/1967.)

CLAP & JAILLET Amélioration de l'utilisation du matériel agricole de
MAL 714 culture attelée. (Ensuring more efficient utilisation of implements used with animal traction.) (Paris, BDPA, undated) 40 pp.

Mainly a technical report, but includes some general considerations such as the shortage of trained artisans for maintenance and repair of farm equipment.

8. IRRIGATION

DE WILDE J C et al Experiences with agricultural development in tropical
MAL 801 Africa. (Baltimore, IBRD, 1967). Vol.II Case studies, Mali: the Office du Niger - an experience with irrigated agriculture, pp 245-300.

A description of activities and, in relation to investments made and benefits anticipated, very limited achievements over more than 30 years. Faults in technical planning and execution, experiments in mechanisation (to compensate for a chronic shortage of settler manpower), and mostly unsuccessful efforts to intensify and diversify output, are critically analysed. Continuing efforts to extend the Office's settlements in recent years despite the underlying weaknesses of its situation have occurred partly from a desire to maximise net output of a heavily capitalised enterprise, but have also been encouraged by competing contributions of foreign development aid. With increasing opportunities for settlement in dryland cotton areas and for rice cultivation in other parts of the Niger valley it seems doubtful whether sufficient settlers will ever be attracted to the Office's areas for its operations to become profitable.

9. MARKETING/CONSUMPTION

LACROUTS M & SARNIGUET J Exploitation du cheptel bovin au Mali. (The
MAL 901 utilisation of the Mali cattle herd.) (Paris, SEAE, 1965) 296 pp (P).

A comprehensive report on production, consumption, marketing, export, and processing of meat, with projections of export demand in Ivory Coast and Ghana to 1975, and a consideration of the prospects for other African markets.

DIETERLEN Germaine & CALAME-GRIAULLE Geneviève L'alimentation dogon.
MAL 902 (Dogon diet.) ("Cahiers d'études africaines", Paris, 1960, No.3, pp 46-89.)

An analysis of food consumption in villages of the Sanga region, by variety and weight, with some estimates of expenditure.

10. PROCESSING INDUSTRIES

BOZZI L & COLOMBINI P Expertise des rizeries du Mali, financée par le
MAL 1001 Fonds Européen de Développement de la CEE. (Experts' report, financed by the European Development Fund of the EEC, on Mali rice mills.) (Rome, SAIS, 1967/République du Mali, Ministère du Plan et du Développement) 76 pp (P).

The production, supply, and demand situation is described, from secondary sources. It is concluded, from an examination of their functioning, that rice mills can only operate profitably with maximum throughput. Areas under rice cultivation and yields must therefore be increased. The report makes recommendations on the means of achieving this and on the parallel technical and managerial improvements required at the mills. The importance is stressed of 'effective, i.e., regular and frequent, supervision' of mill managers by the Offices de Développement after the departure of technical aid personnel.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

MEUNIER J
MAL 1101

Compte rendu d'exécution de l'opération préliminaire de 18 mois au projet de développement rural de la Haute-Vallée. (Progress report after 18 months of preliminary work on the Upper Niger Valley development project.) (Paris, BDPA, 1967) 63 pp.

A critical assessment of technical and economic achievements to date, and of the psychological impact on the local population of the project and of those responsible for carrying it out.

LEYNAUD E
MAL 1102

Contribution à l'étude des structures sociales et de la modernisation rurale dans la Haute-Vallée du Niger. (Contribution to the study of the social structure and of rural modernisation in the Upper Valley of the Niger.) (Paris, BDPA, 1964/République du Mali, Ministère du Développement) 3 Vols. 506 pp.

A historical and social survey. Vol.2 contains a description of traditional agricultural methods and of steps taken to modernise them.

13. STATISTICAL SERVICES

KOROTKY L L
MAL 1301

La statistique agricole du Mali. (Agricultural statistics in Mali.) (Rome, FAO, 1963) EPTA Report 1623, 12 pp.

Recommendations are made for training personnel, setting up sample surveys, and establishing statistical services.

MALAWI 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

MALAWI, MINISTRY OF DEVELOPMENT AND PLANNING. Development Programme.
MWI 101

(Zomba, Government printer, 1967) 162 pp (P).

A list of development projects, with estimates of economic benefit and, where appropriate, additional output to be derived from them. Agricultural products are listed on pp 66-106.

DEQUIN H
MWI 102

Agricultural development in Malawi. (Munich, Weltforum Verlag, 1969/Ifo-Institut für Wirtschaftsforschung) 248 pp (P).

A description of recent and current development policies, of physical and human resources, and farming techniques. Achievements to date are critically assessed.

VON DER GOLTZ G M A study of the economy of Malawi. Draft report to
MWI 103 the government. (Rome, FAO, 1967) 136 pp (restricted).

A detailed economic analysis of agricultural production, trade, and marketing. Problems of transport and agricultural credit, of the financing of the Agricultural Development Corporation's projects, of extension and research, are examined. Potential developments in crop production are analysed. (FAO 01282/1967.)

ANON Guide to agricultural production, 1967/68. (Zomba, Depart-
MWI 104 ment of Agriculture/Ministry of National Resources, 1967?)
15 pp.

This publication, designed for agricultural extension workers, summarises government objectives in agricultural production for 1967/68, pointing out general farm improvement methods, including soil conservation. National aims and yield increasing techniques are outlined for the major crops. Since maize is by far the most important food crop, the need to improve the efficiency of its production is emphasised. There are plans to distribute better seed and supply cheap fertilisers. Soybean, millet, cassava, and sweet potato growing will be encouraged as reliable food crops; Irish potato, bean and banana production need to be increased to satisfy the internal market. Groundnuts are one of the most important export crops and it is planned to increase production over the estimated 1967 record yield of 55,000 short tons. Tobacco, on the other hand, although a major export crop, has a stable market, and because of serious over-production in 1966/67 a rigid quota system of control will be introduced; at the same time it is hoped to increase production and quality of Turkish tobacco (estimated at 120,000 lb. in 1967). Increased cotton production has high priority both as an export crop and to provide raw materials for secondary industries in textiles and oil extraction. Coffee production is at present small-scale through poor management standards; government financial assistance should increase annual production to 500 tons by 1970 and 2,000 tons by 1975. A rapid rice production increase is planned, raising the output (estimated at 5,000 short tons in 1967) to 12,000 short tons of paddy by 1969; with improved varieties and techniques the present 600-700 lb. of paddy per acre can be raised to 4,000 lb. Present wheat production is uneconomic and may give way to barley. Homegrown beef does not fulfil demand and much has to be imported. Poultry improvement schemes are under way. Tree planting and conservation is being encouraged. (WAERSA 162/1968.)

2. REGIONAL STUDIES

DEQUIN H Salima, ein Regional Entwicklungsvorhaben in Malawi.
MWI 201 (Salima, a regional development programme in Malawi.)
("Zeitschrift für ausländische Landwirtschaft", Frankfurt/
Main, 1968, No.1, pp 119-127.)

Description of the proposed programme, to be financed from Federal German development aid, for developing this region of 2,000 sq. km. The average annual increase of 14 per cent in cotton output achieved over the past 15 years should, with adequate investments, be maintained for the next 10 years. Even assuming that prices show a downward trend regional income is expected to grow at an average annual rate of 10 per cent. (WAERSA 1230/1969.)

7. CROP PRODUCTION

DEAN E R Supply responses of African farmers. Theory and measure-
MWI 701 ment in Malawi. (Amsterdam, North-Holland Publishing Co.,
1966) 174 pp (P).

Three main problems are considered: (1) the effect of rising prices on output of cash crops; (2) the existence or not of a backward-sloping supply curve of labour; and (3) the effect on market prices of a number of non-economic variables. (WAERSA 2391/1966.)

9. MARKETING/CONSUMPTION

DEAN E R
MWI 901

Studies in price formation in African markets. ("Rhodes-Livingstone Journal. Human problems in Central Africa", Lusaka, Manchester University Press, June 1962, pp 1-20.)

Prices of three staple cereal commodities were observed in two markets in the Southern province of Nyasaland and in one in Brazzaville. One of the Nyasaland markets and that in Brazzaville were tested to establish a correlation between price and the tribal affiliations of seller and purchaser. The second Nyasaland market was tested to see whether young men received lower prices than young women, old women, or neither. The author concluded tentatively, owing to the smallness of the sample, that neither age-sex group nor tribal membership were determinants of price. However, the fact that the field experiments were based on both rural and urban conditions in two widely-separated parts of the continent, and one in a place (Brazzaville) where tribal antipathies are known to be strong, was considered to offer supporting evidence.

ANON
MWI 902

Sample surveys of agricultural smallholdings. (Zomba, National Statistical Office, 1966 and 1968.) (See MWI 1301, 1302 and 1303.)

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

CATT D C
MWI 1101

Report of survey of progressive farmers in Malawi, 1962-64. (Zomba, External Aids Branch, Ministry of National Resources, 1965) 44 pp.

Apart from experience gained by extension workers, doubt is cast on the value of case studies of progressive farmers for any use other than a superficial analysis of the economics of the individual farm. (WAERSA 2220/1967.)

CATT D C
MWI 1102

Report of Chikwawa District Farm Survey. (Zomba, Ministry of National Resources, 1964) 43 pp.

A pilot survey mainly designed to provide information about extension methods. (WAERSA 2221/1967.)

13. STATISTICAL SERVICES

ANON
MWI 1301

SASH (Survey of Agricultural Smallholdings): Preliminary results, Chikwawa, September to November 1965. (Zomba, National Statistical Office, 1966) 25 pp.

The results of that part of the survey dealing with consumer expenditure and non-farm income are considered experimental only, but provide important guide-lines for the planning of future rural surveys. (WAERSA 1601/1967.)

ANON
MWI 1302

A sample survey of agricultural smallholdings in the central region of Malawi, March to May 1966. (Zomba, National Statistical Office, 1966) 36 pp.

The purpose of the survey, besides providing information on the smallholdings sector, was to obtain experience in the design of larger scale surveys, particularly in area measurement. (WAERSA 1602/1967.)

MALAWI 13

ANON
MWI 1303

A sample survey of agricultural smallholdings in Central Region, April-June 1967. (Zomba, National Statistical Office, 1968) 50 pp.

Methodology is described. The questions asked in the survey mainly concern agriculture: type of tenure, equipment and buildings on the holding, use of fertilisers and insecticides, expenditure on cash crops and on animal husbandry. Sources of farm and non-farm incomes are also analysed. Two sections deal with household consumption, one covering consumer durables, clothing and furnishings, the other food, drink, and tobacco. Volume of demand for a given article is expressed in terms of percentage of housholds which purchased it during the previous week.

MAURITANIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

MAURITANIE, MINISTERE D'ETAT CHARGE DU PLAN, DE LA COOPERATION ET DES
MAU 101

AFFAIRES ECONOMIQUES ET FINANCIERES. Plan quadriennal de développement économique et social 1963-1966. Bilan de trois années d'exécution. (Four-Year Plan for Economic and Social Development, 1963-1966. Stock-taking after three years.) (Nouakchott, 1967) 80 pp.

Progress to 30th June 1966 of the major investment projects in the agricultural sector are summarised in Chapter III (pp 26-34).

WESTEBBE R M
MAU 102

et al Esquisse d'un programme de développement quinquennal. (Outline five-year development plan.) Report of a mission organised by the International Bank for Reconstruction and Development at the request of the Islamic Republic of Mauritania. (Washington, DC, IBRD, 1967) Vol.1 (143 pp). (Vol.II - technical Annexes - to follow.)

The mission's proposals for action in the rural sector are contained in Chapter I (pp 29-52). Chapter V includes comments on the agricultural credit situation. Details of development projects will be published in Vol.II.

ANON
MAU 103

Réalisations et projets de l'économie mauritanienne en 1964. (Achievements and future plans for the economy of Mauritania in 1964.) (Notes et information statistiques de la Banque Centrale des Etats Africains de l'Ouest, 1965, No.119, pp 1-32.)

An analysis of production and trade, including agriculture. (WAERSA 1429/1966.)

REICHHOLD W
MAU 104

Islamische Republik Mauritanien. (The Islamic Republic of Mauritania.) (Bonn, Schroeder, 1965) 94 pp.

A general economic survey including chapters on agricultural production of nomadic tribes and in the oases, and on attempts to modernise agriculture. (WAERSA 3273/1965.)

PUJOS J
MAU 105

Croissance économique et impulsion extérieure: étude sur l'économie mauritanienne. (Economic growth and external stimuli: a study of the economy of Mauritania.) (Paris, PUF, 1964) 314 pp (P).

In Part I the basic disequilibria of the economy are described. Part III contains an assessment of the role of the primary sector in future economic development.

CHEREL J
MAU 106
Secteur traditionnel et développement rural en Mauritanie. (Development in a rural community in Mauritania.) ("Tiers-Monde", 1967, No.31, pp 631-677.)

A critical appraisal of planning and development policies, with particular reference to irrigation projects and extension work in the Eastern Hodh.

2. REGIONAL STUDIES

CANTRELLE P *et al*
MAU 201
La moyenne vallée du Sénégal. Etude socio-économique. (A sociological and economic study of the middle Senegal valley.) (Paris, PUF, 1962) 368 pp (P).

This comprehensive demographic, social and economic study includes estimates of agricultural supply and demand, and family consumption budgets.

WOILLET J C & ROBINEAU C
MAU 202
Etude socio-économique de la plaine de Boghe. (Social and economic study of the Boghe plain.) (Paris, BDPA, 1964) 2 Vols. 341 pp.

A description of the geographical, demographic, farm, and market structure of the region, followed by proposals for its development of a rather general nature.

LAMBERT P A
MAU 203
Propositions pour l'utilisation d'un aménagement hydro-agricole de la plaine de Boghe. (Proposals for proceeding with the development of irrigation and agriculture in the Boghe Plain.) (Paris, BDPA, 1966) 158 pp.

A complementary report to the previous one, treating the agricultural situation in greater depth. A number of specific development projects are proposed.

MARTIN R
MAU 204
Essai de monographie agricole du secteur Est (Aioun et Atrouss). (Study of agriculture in the Eastern sector.) (Nouakchott, Ministère de l'Economie Rurale) 49 pp.

Inventory of agricultural resources and production, with guide-lines for raising output.

CHEREL J
MAU 205
Projet d'équipement de zones rurales du Hodh oriental. (Rural equipment project in Eastern Hodh.) (Nouakchott, Ministère du Développement, 1965) 6 pp and six Zonal Annexes covering 36 villages.

Economic assessment, village by village, of the results of proposed investments in agricultural implements and equipment, with estimated crop yields over the next three years.

7. CROP PRODUCTION

LEMAITRE C
MAU 701
Les problèmes de la culture attelée dans le secteur agricole du fleuve. (Problems of animal traction in the agriculture of the Senegal valley.) (Kaédi, République Islamique de Mauritanie, Service de l'Agriculture, 1962) 27 pp.

Adoption of animal traction is the only means of raising output and, thus (if market outlets are also organised) of raising farm incomes to an extent that might check the drift from the land.

9. MARKETING/CONSUMPTION

LACROUTS M, TYC J & CLEMENT P Exploitation du bétail mauritanien: projet d'expéditions de viandes foraines à partir de Kaédi. (Marketing cattle in Mauritania. Project for despatching meat from nomadic herds at Kaédi.) (Paris, SEDES, 1962) 179 pp (P).
MAU 901

A study of the economics of supplying Nouakchott, Port Etienne, Fort Gouraud, and possibly Dakar, with meat by air from Kaédi.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

ROYAUME DU MAROC, CABINET ROYAL, DELEGATION GENERALE A LA PROMOTION NATIONALE ET AU PLAN. Plan triennal 1964-67. (Three-Year Plan, 1964-1967.) (Rabat, Division de la Coordination Economique et du Plan, 1965) 602 pp (P).
MOR 101

Agriculture is dealt with in Part I (pp 75-120). There is a separate chapter on food industries (pp 483-495).

TIANO A La politique économique et financière du Maroc indépendant. (Economic and financial policy in Morocco after independence.) (Paris, PUF, 1963) 284 pp (P).
MOR 102

The study includes a critical assessment of the initial activities of the National Irrigation Board (ONI) and the National Rural Modernisation Board (ONMR), and describes the 1961 measures to reform agricultural credit.

BEYEN J W et al Le développement économique du Maroc. (The economic development of Morocco.) (Washington, DC, IBRD, 1965) 362 pp.
MOR 103

Chapter 7 of the World Bank Report (pp 104-152) comprises a brief description of the agricultural situation, followed by more extensive recommendations for future action on land tenure, administrative reform, training of cadres, credit, and price and marketing policies. An investment programme for 1965-70 is proposed.

TEILLAC J Mythes et réalités de l'économie du Maroc. (Myths and realities of the Moroccan economy.) ("Revue de défense nationale", Paris, April 1967, pp 590-604.)
MOR 104

A critique of Rostow's theory of growth in the light of the economic history of Morocco since independance.

EL GHORFI N Contribution à l'édification d'une politique agricole. (Constructing an agricultural policy.) (Rabat, Institut National de Recherche Agronomique, 1964) 553 pp.
MOR 105

A comprehensive account of agricultural problems in Morocco and of actual and future policies.

NACIRI M Les expériences de modernisation de l'agriculture au Maroc. (Experiences in modernising Moroccan agriculture.) ("Revue de la géographie marocaine", Casablanca, 1967, No.11, pp 102-114.)
MOR 106

Historical development to 1964 and a description of the 1965/67 plan. (WAERSA 3524/1967.)

MEI F & ACCOLTI GIL F
MOR 107
Situazione dell'agricoltura in Marocco et il 'colloquio agricolo' di Rabat. (Florence, Instituto Agronomico per l'Oltremare, 1964). (The agricultural situation in Morocco and report of the main themes of discussions at a natiional conference on agricultural problems held at Rabat in March 1964.) ("Rivista di Agricoltura Subtropicale et Tropicale", 1964, No.2, pp 235-249.)

ISNARD H
MOR 108
Le Maghreb. (The Maghreb.) (Paris, PUF, 1966) 272 pp (P).

A general geographical, economic and political account.

2. REGIONAL STUDIES

ARRIGHI de CASANOVA J
MOR 201
Maroc: projet Oued Sébou. Rapport de mission. July 1965. (Report on a mission to the Oued Sébou project in Morocco, July 1965.) (Rome, FAO, 1965) 48 pp.

Progress report and recommendations for future action as regards the cultivation of rice, sugar-cane and other irrigated crops. Examination of irrigation costs. Recommendations for further economic studies and for experimental research.

ANON
MOR 202
Le développement économique rural du Rif occidental. (Rural and economic development of the Western Rif.) (Rome, FAO, 1965) Vol.1, text of report. 225 pp.

The recommendations are for a five-year programme, but a 25-year programme is also examined. The main problem is one of erosion. (WAERSA 3584/1967.)

BALLAN P et al
MOR 203
Etude de l'unité de développement rural de Brickcha. Etude de practicabilité du périmètre de Zeitouna. (Study of the Brickcha rural development unit. Feasibility study for the Zeitouna 'périmètre'.) (Paris, SICORES, 1966/ Ministère du Développement, Royaume du Maroc) 156 pp.

Two studies made within the framework of Projet DERRO (Projet pour le développement économique rural de la région du Rif Occidental - Western Rif Economic Rural Developmnnt Plan.) From the data assembled in the first study the authors selected for priority development from among a number of possible 'périmètres' that of Zeitouna. The second study comprises a cost/benefit analysis of the investments proposed there.

LEVEAU R
MOR 204
Réalisation de périmètresexpérimentaux de développement rural et formation de cadres agricoles dans le Rif Occidental, rapport de fin de mission. (Setting up of experimental rural development areas and education of agricultural cadres in the Western Rif. Report on a mission.) (Rome, FAO, 1967) 10 pp (restricted).

Economic appraisal of government action in experimental pilot areas in Western Rif, including rural extension. Note on returns on investment.

LEVASSEUR B
MOR 205
Note technique sur le rapport de synthèse (DERRO). (Technical note on the final report on the Western Rif Development Plan.) (Rome, FAO, 1967) 15 pp.

Working paper explaining results of final project report on rural economic development in the Western Rif.

LAHLIMI A
MOR 206

Les terres irriguées et le monde rural de la Tessaout Moyenne. (The irrigated lands and the rural population of Central Tessaout.) ("Revue de la géographie marocaine", Casablanca, 1967, No.11, pp 3-38.)

The complicated system of land and water rights is discussed and the importance of examining the whole socio-economic structure of the area is stressed. (WAERSA 4317/1967.)

3. LAND TENURE

ZARTMAN W
MOR 301

Farm and land ownership in Morocco. ("Land Economics", Madison, Wisconsin, 1963, No.2, pp 187-198.)

An analysis of past failures and the outlook for the future. (WAERSA 1249/1964.)

MARTHELOT P
MOR 302

Diverses expériences tentées dans le domaine rural avant l'indépendance du Maroc. (Rural policies in Morocco before independence.) (In "Agriculture, land reforms and economic development", SACHS I (Editor), Warsaw, PWN Polish Scientific Publishers, 1964) 284 pp.

(WAERSA 577/1965.)

GOUSSALT Y
MOR 303

Diverses expériences tentées dans le domaine rural après l'indépendance du Maroc. (Rural policies in independent Morocco.) (In "Agriculture, land reforms and economic development", SACHS I (Editor), Warsaw, PWN Polish Scientific Publishers, 1964) 284 pp.

(WAERSA 577/1965.)

BEN BARKA M
MOR 304

Conditions de la réforme agraire au Maroc. (Agrarian reform in Morocco.) (In "Agriculture, land reforms and economic development", SACHS I (Editor), Warsaw, PWN Polish Scientific Publishers, 1964) 284 pp.

(WAERSA 577/1965.)

LAZAREV G
MOR 305

Structures agraires et grandes propriétés en pays Hayaina (Prerif). (Agrarian structures and large properties in the Hayaina region.) ("Revue de la géographie marocaine", Casablanca, 1966, No.9, pp 23-58.)

A discussion of latifundia and the concomitant phenomena of absentee landlords and share-cropping. (WAERSA 1687/1967.)

AARIOUS
MOR 306

Réforme agraire au Maghreb (séminaire sur les conditions d'une véritable réforme agraire au Maroc.) (Land reform in the Maghreb: seminar on the conditions necessary for a genuine land reform in Morocco.) (Paris, Maspero, 1963.)

Proceedings of a seminar held in 1962, contributors to which included René DUMONT, Yves GOUSSALT and Mehdi BEN BARKA.

6. LIVESTOCK PRODUCTION

HILL D H
MOR 601

Développement de l'industrie animale. (Development of the livestock industry.) (Rome, FAO, 1957) 20 pp.

Fodder and pasture resources are examined.

ANON
MOR 602

Misset's Zuivelbereid. (Moroccan dairy industry.) ("en-Handel", Doetinchem, 1966, No.15, pp 330-333.)

Production and trade statistics. (WAERSA 3425/1966.)

7. CROP PRODUCTION

ANON
MOR 701

Enquête par sondage sur la production agricole des périmètres de l'Office National des Irrigations du Maroc. (Sample survey of agricultural production in the 'périmètres' of the National Irrigation Board.) (Paris, SEDES, 1963) 24 pp and Annexes.

Basse-Moulouya: yields of durum wheat, soft wheat, barley: Gharb and Tadla: crop acreages in general; some cereal yields; Doukkala: yields of maize and wine; Haouz: yields of durum wheat, maize, soft wheat and olives. Mainly a study of sampling methodology, but some results are given.

KEBBAJ A E K
MOR 702

L'économie céralière au Maroc: étude statistique. (The grain economy of Morocco: a statistical study.) (Rabat, Office chérifien inter-professionel des céréales, 1964) 164 pp.

A review of the activity of the National Board of cereal producers and traders in promoting grain production and trade. (WAERSA 3354/1964.)

RAZLOVLEFF S
MOR 703

La culture de la betterave dans le Rharb. (Sugar-beet growing in the Rharb region.) (Projet Sébou, 1965) 100 pp.

The report examines areas and yields, and the factors affecting them, for the three seasons 1962/63 to 1964/65. Normative costs of production, for both mechanical and animal traction, are established. The cost to the government of extension services and subsidised machinery services and of credit to producers is analysed. Machinery costs could be lowered by more efficient management to a point at which the producers could bear the full cost - and, given a 25 per cent increase in yields, do so without loss of income.

SURUQUE P G
MOR 704

Quelques perspectives sur le problème des oléagineux au Maroc. (Aspects of the oil crop problem in Morocco.) ("Al Awamia", Rabat, 1963, No.6, pp 135-156.)

Processing capacity exceeds production. Of possible crops sunflower seed is considered the most promising. (WAERSA 1808/1964.)

CHAPOT H
MOR 705

L'agrumiculture marocaine. (The Moroccan citrus industry.) ("Cahiers de recherches agronomiques", Rabat, 1964, No.18, pp 1-25.)

A descriptive analysis. (WAERSA 2853/1966.)

8. IRRIGATION

ARRIGHI de CASANOVA J
MOR 801

Rapport de Mission: Office Nationale des Irrigations. (Report on a mission to the National Irrigation Board.) (Paris, Ministère des Affaires Etrangères, Co-opération Technique, 1964) 26 pp.

A constructively critical assessment of the Board's achievements to date (March 1964), with technical recommendations, whose general adoption must depend primarily, it is recognised, on the effectiveness of extension work.

BRUNET S
MOR 802
L'office national des irrigations au Maroc: deux ans d'expérience. (The National Irrigation Board: two years' experience.) (Paris, CNRS, "Annuaire d'Afrique du Nord", 1962, pp 244-268.)

Description of the Board's activities during the first two years and an interim assessment of its achievements.

9. MARKETING/CONSUMPTION

BENSIMON J
MOR 901
La commercialisation traditionelle des produits agricoles dans les périmètres de l'ONI. (Traditional marketing of agricultural produce in the areas covered by the National Irrigation Board.) ("Les hommes, la terre et l'eau", Rabat, 1964, No.7, pp 314-325.)

Shortcomings of the traditional system are described and proposals made for its improvement.

ANON
MOR 902
Le marché du bétail de reproduction et d'élevage et le marché des viandes au Maroc. (The market for breeding and fatstock and the meat market in Morocco.) (Paris, CNCE, 1964) 213 pp (P).

Production, consumption, trade, prices, and marketing of all types of meat except poultry. A descriptive analysis, with forecasts of production and consumption in 1970 based on secondary sources.

CODA-NUNZIANTE G
MOR 903
Outlook for production and trade of selected horticultural products in Mediterranean countries: report on Morocco. (Rome, FAO, 1967) 51 pp.

Production of, and trade in, fruit (especially citrus) and vegetables (especially fresh) is analysed, and the future outlook examined.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

DUBOIS
MOR 1101
Pour une réforme de l'administration agricole au Maroc. Leçons d'une expérience viticole: la reconstitution du vignoble rifain. (Reforming the Moroccan agricultural administration. Lessons from a viticultural experience. Replanting the vineyards of the Rif.) (Paris, PUF, 1965) 113 pp (P).

Progress on the replanting scheme was slow partly due to the neglect of various economic factors and partly to the failure of extension services. Proposals are made to improve these by changing training methods and the administrative organisation. (WAERSA 3999/1966.)

ASHFORD D E
MOR 1102
Rural commune experiment in Morocco. ("Journal of Rural Development Administration", Peshawar, 1965, No.1, pp 71-106.)

The evolution of new fomms of community is a process of creation, the pace of which is not determined by the need for such forms, but by sociological and psychological factors that have a time-scale of their own. (WAERSA 2062/1965.)

GOUSSAULT Y
MOR 1103
Animation et encadrement dans les périmètres irrigués au Maroc. ('Animation' and creation of cadres in the irrigated zones of Morocco.) (Paris, IRAM, 1967) 18 pp.

Lessons learnt from the application of different extension methods (mass media, 'animation rurale') in the irrigated zones during the course of a contract (1961/1964) between IRAM and the now defunct Office National des Irrigations.

CHEVALDONNE F et al
MOR 1104
Persuasion et communications de masse: l'expérience de la campagne betteravière. (Persuasion and mass communication: the experience of the sugar-beet campaign.) ("Les hommes, la terre et l'eau", Rabat, 1963, No.4, pp 81-90.)

The exercise was divided into two phases: an initial intensive campaign to persuade farmers to grow sugar-beet and sign oontracts, and a phased follow-up campaign timed to coincide with the main cultivations and with harvesting. To encouaage farmers to take up beet production the media used were posters, radio, film shows and the traditional story-tellers in the soukhs, combining information with an appeal to the farmer's patriotism and self-interest. The follow-up was by means of posters and wall photo-strips, a mainly pictorial extension pamphlet, technical film shows for village groups, and twice-weekly 15-minute radio broadcasts. Each beet-grower was issued with an important-looking contract card.

12. RURAL/URBAN RELATIONS

BENJELLOUN M
MOR 1201
Rôle économique, social et politique des zones urbaines et rurales au Maroc. (Economic, social and political role of urban and rural areas in Morocco.) Working paper No.18 for the 34th session of INCIDI, Aix-en-Provence, September 1967. 16 pp (P).

The particular nature of the economic dualism affecting Morocco is briefly outlined, and action being taken to mitigate its most serious economic and social imbalances is described by the author, at the time director of planning and statistics at the Haut-Commissariat au Plan.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DU NIGER, COMMISSARIAT GENERAL AU PLAN.
NIG 101
Perspectives décennales de l'économie nigérienne 1965-1974. (Ten-year economic forecast for Niger 1965-1974.) (Niamey, 1964) 2 vols. 608 pp.

Vol.1 Part I describes the existing economic situation, its imbalances, and the obstacles to development. Part II sets out basic objectives for the next decade. Those for agriculture are discussed on pp 189-204. Vol.2 Part III lays down main lines of action, including structural reform of agriculture (pp 342-360). Part IV lists details of action to be taken sector by sector. Under agriculture separate sections are allotted to crop and livestock production (pp 416-466), the latter including forecasts of numbers of all types for 1974.

RAULIN H
NIG 102
Enquête socio-économique rurale 1961-1963. (Rural sociological and economic survey 1961-1963.) (Niamey, IFAN/CNRS) 153 pp.

Results of a survey of labour patterns on individual holdings and food consumption in rural villages. Among aspects of labour productivity, division of family labour and time spent on individual cultivations are recorded.

BESSIS A C *et al* Report of a mission for the study of problems and
NIG 103 prospects in the rural development of Mali, Niger, and Upper Volta. (Addis Ababa, UN/ECA, 1966) 246 pp.

For summary see MAL 106.

2. REGIONAL STUDIES

CHEVALLIER J Programmation régionale au Niger. (Regional planning in
NIG 201 Niger.) (Paris, IRFED, 1969/SEAE) 111 pp.

The purpose of the mission here described was to define the aims of priority development zones and help set up planning machinery at 'arrondissement' level. It was found that to date efforts to decentralise planning had been largely ineffective, leaving a virtual vaccuum between the nationalised plan and a large number of small unco-ordinated local activities. The need to establish regional plans is therefore absolutely essential, and proposals are made to this end.

ECHARD Nicole Etude socio-économique dans les vallées de l'Ader Doutchi
NIG 202 Majya. (Sociological and economic study of the Ader Doutchi-Majya valleys.) (Niamey, IFAN/CNRS, 1964) 189 pp.

Data is presented on the rural economy, rural sociology, land, agriculture, labour and demography of Niger. (WAERSA 3140/1966.)

GANON F *et al* Etude démographique et économique en milieu nomade.
NIG 204 (Demographic and economic survey of nomad populations.) (Niamey, Mission Economique et Pastorale/Paris, Ministère de la Coopération, 1966/République du Niger, Mission Economique et Pastorale.) Vol.I (57 pp) Methodology; Vol.II (201 pp) (P).

Results of demographic survey, household budget survey, and consumption survey. The budget survey is divided between Peul and Touareg households. The third survey gives both aggregate and *per capita* food consumption. Non-food items are not covered.

MAINET G & NICOLAS G La vallée du Gulbi de Maradi. Enquête socio-
NIG 205 économique. (Sociological and economic survey of the Gulbi Valley in the Maradi region.) (Bordeaux, IFAN/CNRS, Documents des études nigérienne, 1964) 315 pp.

Inventory of physical and human resources; description of social, economic, and agrarian structure; and analysis of problems connected with the development of irrigation and of agricultural production.

NICOLAS G *et al* Etude socio-économique de deux villages hausa: enquête
NIG 206 en vue d'aménagement hydro-agricole dans la vallée du Maradi, Niger. (Sociological and economic study of two Hausa villages. Survey carried out in connection with a proposed irrigation scheme in the Maradi Valley.) (Paris, CNRS/IFAN, Niger, 1968) 251 pp.

A further study with the same format and aims as NIG 205.

3. LAND TENURE

RAULIN H Travail et régimes fonciers au Niger. (Work and systems
NIG 301 of land tenure in Niger.) ("Cahiers de l'ISEA", 1965, No.166, pp 119-139.)

Traditional patterns of work may have as much influence on agricultural productivity as systems of customary land tenure.

5. CAPITAL AND CREDIT

GIGNOUX J L
NIG 501

Union Nigeriénne de Crédit et de Coopération. Compte-rendu d'activités des origines au 28 février 1966. (The UNCC. Progress report from its inception to 28th February 1966.) (Niamey, 1966) 64 pp.

Includes financial report for two full years' operation.

SCHMANDT L
NIG 502

Union Nigérienne de Crédit et de Coopération (UNCC) I (Feb. 1965) 38 pp; II (Feb. 1966) 18 pp.

Critical assessment of two years' operation, and progress report after a further year of activity.

BELLONCLE G
NIG 503

Une expérience d'animation coopérative au Niger. (An experiment in co-operative 'animation' in Niger.) ("Archives Internationalesde Sociologie de la Coopération", Paris, 1967, No.21, pp 47-73.)

The author describes in diary form the day-to-day problems of applying in practice concepts of 'animation rurale' worked out theoretically; of getting 'gestionnaires' (extension workers trained in co-operative management), and 'animateurs' (with their training in a more personal, psychological approach to the country people) to work in harness. The organisation of the village co-operative credit groups is described. Each group now deals as a collective body with the National Union of Credit Co-operatives (UNCC) instead of, as formerly, the UNCC attempting to deal direct with each individual borrower.

6. LIVESTOCK PRODUCTION

LACROUTS M & TYC J
NIG 601

Les ressources animales de la République du Niger: leur exploitation et perspectivesd'avenir. (Present utilisation of livestock resources in the Niger Republic and outlook for the future.) (Paris, SEDES, 1960) 106 pp (P).

Production and marketing is described, and recommendations made for their improvement. General outlook.

NIVERD C
NIG 602

Etude des problèmes de l'exploitation et de la commercialisation du bétail au Niger. (Examination of the problems of cattle-raising and marketing in Niger.) (Paris, Ministère de la Coopération, 1964) 32 pp.

Mainly a consideration of the key Nigerian market and the desirability of supplying it through the at present under-utilised slaughterhouse and refrigeration plant at Niamey rather than by illegal exports of cattle from Niger on the hoof.

DEL PERUGIA J
NIG 603

Les possibilités d'amélioration de la production bovine. Rapport au gouvernement. (Report to the government on the prospects of improving cattle production.) (Rome, FAO, 1967) 42 pp. (FAO 00881/1967.)

Study of economic aspects of cattle-raising. Recommendations for cattle-breeding station, increased forage production, and local cattle-rearing centres.

MAINET G
NIG 604

L'élevage dans la région de Maradi. (Cattle-raising in the Maradi region.) ("Les Cahiers d'Outre-Mer", Bordeaux, 1965, No.69, pp 32-72.)

A description of semi-nomadic cattle-raising in Niger, the main movements of livestock, and markets. Problems facing any attempt at modernisation are discussed.

BONTE P
NIG 605
L'élevage et le commerce du bétail dans l'Ader Doutchi-Maya. (Cattle-raising and marketing in Ader Doutchi-Maya.) (Paris, IFAN Niger/CNRS, 1967) Etudes nigériennes, No.23, 195 pp (P).

Report on a mission between December 1965 and January 1967 in Ader Doutchi-Maya, which is not a homogeneous geographical or administrative region of southern Niger, but a development region. Part I describes the pastoral economy, its physical and social background and farming methods. The cattle population and its composition are estimated. The relationship of the pastoral economy with crop agriculture is discussed, including the efforts which have been made to integrate them so far and the outlook for future measures. Part II examines the extent of auto-consumption and of marketing of sheep and cattle. It describes the activities of butchers, tanners, and leatherworkers, middlemen ('dillalis') and cattle dealers. The export trade to Nigeria (including contraband) add the internal markets for meat, skins and hides, and dairy products are analysed.

7. CROP PRODUCTION

DURAND C L *et al*
NIG 701
Production et commercialisation des produits vivriers au Niger. (Production and marketing of food crops in Niger.) (Paris, SEDES/Ministère de la Coopération, 1963) 7 Vols.

For summary see NIG 901

VAN GENDEREN W E
NIG 702
Possibilités d'extension de la culture de la canne à sucre. (Possibilities for increasing cane-sugar production.) (Rome, FAO, 1964) 6 pp.

Income per hectare from sugar growing on family holdings is estimated. Technical aspects of setting up village mills, worked by animal traction, for producing brown sugar are discussed. Such mills are considered economically viable. Installation of refineries to produce white sugar is not recommended since the necessary minimum local output of the right type of cane, water supplies for irrigation, transport facilities, and other economic desiderata, do not at present exist.

LE QUINIO A
NIG 703
Mécanisation de l'agriculture au Niger. Situation actuelle, améliorations en cours. Suggestions pour orienter et intensifier cette évolution. Rapport de mission nov.-déc. 1964. (Farm mechanisation in Niger. Present situation and improvements being carried out. Proposals for guiding and intensifying them.) (Antony, CEEMAT, 1964) 73 pp.

Recommendations for extension services, credit, and development of animal, and not mechanical, traction.

GÜSTEN R & SCHWARZ O
NIG 704
Voraussetzungen und Möglichkeiten der Anwendung von Mineraldünger in der Republik Niger. (Preconditions and possibilities of chemical fertiliser application in the Niger Republic.) (Frankfurt/Main, Bundesamt für gewerbliche Wirtschaft, 1964) 118 pp.

In present conditions - high transport costs, uneven rainfall, and low standards of husbandry - the value of the additional yields to be obtained from applying compound fertilisers to groundnuts in Niger is very far from even covering their costs. Light dressings of very low-cost fertilisers, supplying only the soil's major deficiences, might eventually prove profitable, but further extensive trials are essential. There is in any case little prospect at present of higher prices for export crops, and none at all of manufacturing fertilisers economically locally, or even of obtaining them cheap from neighbouring countries. Phosphates may be available from Mali in the long term. Applying fertilisers to millet, the staple food crop, is also uneconomic, no shortage of land being likely in the near future. In certain circumstances dressings can profitably be applied to cotton and rice, but the possibility of producing these on a large scale is limited.

GÜSTEN R
NIG 705
Die Rentabilität der Verwendung von Mineraldünger bei Erdnüssen in Senegal, Nordnigeria, und Niger. (The economics of fertiliser application to groundnuts in Senegal, Northern Nigeria and Niger.) ("Zeitschrift für ausländische Landwirtschaft", Frankfurt/Main, 1965, No.2, pp 149-152.)

Input costs and profits per ha. in the three countries are compared. Further research on fertiliser use and on the possibility of domestic fertiliser production in West Africa are recommended. (WAERSA 1844/1965.)

8. IRRIGATION

SORDOILLET R
NIG 801
Projet d'irrigation de Birni n'Konni (Niger). (Irrigation project at Birni n'Konni (Niger).) (Paris, SATEC, 1965/ Ministère de la Coopération.)

Preliminary appreciation of the agricultural, technical, and economic aspects of an irrigation project in southern Niger.

9. MARKETING/CONSUMPTION

DURAND C L *et al*
NIG 901
Production et commercialisation des produits vivriers au Niger. (Production and marketing of food crops in Niger.) (Paris, SEDES 1962/Ministère de la Coopération) 7 vols.

Vol.1 (303 pp) Millet and sorghum. Existing supply and demand situation. Assessment of distribution costs and evaluation of the pros and cons of the current marketing system. Projection of domestic and external demand to 1970. It should be possible to raise production and improve marketing channels by relatively simple means not requiring large investments. Vol.2 (162 pp) Rice. A similar examination as for millet and sorghum. Analysis, projections and proposals. Vol.3 (134 pp) Similar treatment. Vol.4 Annexes and Maps. Vol.5 (46 pp) Rice - summary report. Vol.6 (52 pp) Millet and sorghum - summary report.

ANON
NIG 902
Commercialisation des arachides au Niger. (Marketing of groundnuts in Niger.) (Paris, COGERAF, 1961) 4 vols.

Vol.1 (155 pp and Annexes) describes the Marketing Board system in Nigeria. Vol.2 (143 pp) describes the marketing situation in Niger. Vol.3 (116 pp and Annexes) contains proposals for the reform of marketing and transport (both internal and to the sea). Vol.4 Tables and graphs.

CARLE P
NIG 903
Les problèmes d'organisatinn du marché de l'arachide dans les états de l'Afrique de l'Ouest. (Problems of organising the market for groundnuts in West African states.) ("Coopération et Développement", Paris, 1964, No.2, pp 17-26.)

A description of the difficulties encountered and of the different solutions attempted in Senegal, Niger, and Nigeria.

GASSEND G
NIG 904
Le marché du riz au Niger. (The market for rice in Niger.) (Paris, SEAE, 1969) 28 pp.

An assessment of the unsatisfactory state of the domestic market, which is over-supplied with rice, much of it of poor quality. No reliable data are available either of paddy production or of the output of milled rice, nor is there any check on local outlets for hand-pounded rice. There is a substantial illegal trade across the frontiers. Recommendations are made for improving production, through better varieties, and marketing, through more efficient milling and lower prices.

LACROUTS M & TYC J
NIG 905
Les ressources animales de la République du Niger: leur exploitation et perspectives d'avenir. (Present utilisation of livestock resources in the Niger Republic and outlook for the future.) (Paris, SEDES, 1960) 106 pp (P).

For summary see NIG 601

BONTE P
NIG 906
L'élevage et le commerce du bétail dans l'Ader Doutchi-Maya. (Cattle-raising and marketing in Ader Doutchi-Maya.) (Paris, IFAN Niger/CNRS, 1967) Etudes nigériennes, No.23, 195 pp (P).

For summary see NIG 605.

CALLAIS J
NIG 907
Le delta intérieur du Niger: étude de géographie régionale. (The interior delta of the Niger: a geographical and regional examination.) (Dakar, IFAN, 1967) 2 v ls. 358 pp and 260 pp (P).

Chapter 2 of Part 5 gives a descriptive analysis of recent developments in the distributive system in the commercial centre of Mopti, Moyen-Niger, where fish is the main commodity.

MICHAUD D
NIG 908
Les budgets familiaux africains à Niamey 1961-1962. (African family budgets in Niamey 1961-1962.) (Paris, Ministère de la Coopération/Niger, Service des Statistiques, 1964) 75 pp.

Methodology and findings, covering food, clothing, housing, and miscellaneous items, of a survey of an urban area.

10. PROCESSING INDUSTRIES

NIGER: BANQUE DE DEVELOPPEMENT.
NIG 1001
Le maintien de l'équilibre vivrier par la transformation industrielle des mils et sorghos. Projet de création d'une minoterie pilote. (Maintaining a balanced diet by means of industrial processing of millet and sorghum. Proposal for setting up a pilot mill.) (Niamey, 1966) 60 pp.

A pilot mill would give practical experience in the techniques of preparing packaged cereal flour products for which there is likely to be, in the long term at least, a growing demand, and in consumer research. Compound animal feeds would also be produced on a small scale.

ROBINET A H
NIG 1002
Cuirs et peaux du Niger. Production, perspectives. (Hides and skins in Niger. Production and outlook.) ("Revue d'élevage et de médecine vétérinaire", Maisons-Alfort, 1964, No.1, pp 103-149.)

Production add marketing, including external trade, to 1963.

ROHN F
NIG 1003
Les possibilités d'une sucrerie au Niger. Rapport au gouvernement. (Report to the government on the possibilities

of establishing a sugar factory.) (Rome, FAO, 1967) 116 pp (restricted).

Assessment of development potential for irrigated sugar-cane production, and economic appraisal of a sugar factory.

ANON
NIG 1004
L'huilerie au Niger. (Oil mills in Niger.) (Paris, COGERAF, 1964) 92 pp.

Analysis of current situation and outlook. The report recommends that output should be further developed.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

VERDIER R
NIG 1101
Le recrutement et la formation des cadres moyens agricoles dans la perspective du développement économique des Etats de Côte d'Ivoire, Niger, République Centrafricaine et Tchad. (Recruitment and education of middle-grade agricultural cadres seen against the background of economic development.) (Paris, BDPA, 1967) 57 pp.

For summary see CHA 1103.

COLIN R
NIG 1102
L'animation du développement dans la république du Niger. (The quickening of development in the Niger Republic.) (Paris, IRAM, 1967) 30 pp.

The developments of 'animation rurale', with the assistance of IRAM, since 1961 is described, and future tasks outlined.

12. RURAL/URBAN RELATIONS

VIAL J
NIG 1201
Implantation d'artisanats industriels du tissage en Afrique (Tchad, Cameroun, Niger et Haute Volta). (Setting up artisanal weaving industries in Africa (Chad, Cameroon, Niger and Upper Volta).) (Paris, SEDIAC, 1964) 127 pp.

For summary see UPV 1203.

CHIROT D
NIG 1202
Urban and rural economies in the Western Sudan: Birni N'Konni and its hinterland. ("Cahiers d'Etudes Africaines", Paris, 1968, No.32, pp 547-565.)

The interaction of the two economies, historically and today, is described, and the emergence of an exchange economy in the rural villages analysed.

NIGERIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

FEDERATION OF NIGERIA. 1962-1968 Development Plan. (Lagos, Federal
NGA 101
Ministry of Economic Development) 362 pp (P).

Problems, possibilities, and objectives for agriculture are briefly examined in the Federal Government's programme (pp 55-56) and in that for Western Nigeria (pp 283-296) at somewhat greater length.

SCHATZ S P
NGA 102
Nigeria's first national development plan (1962-1968), an appraisal. ("Nigerian Journal of Economic and Social Studies" Ibadan, 1963, No.2, pp 221-235) NISER Reprint Series, No.3.

The Plan is critically appraised on four main counts: lack of worthwhile projects, lack of financial resources, lack of executive capacity, and lack of real resources.

DIEJOMAOH V D Nigeria's first national development plan (1962-1968), an appraisal. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1963, No.2, pp 221-235.) NISER Reprint Series, No.3.
NGA 103

A descriptive analysis of Nigeria's international trade, investment, population, and labour force. Inter-regional and inter-tribal jealousies result in considerable misallocation of scarce resources and duplication of services, institutions, and productive capacity.

LEWIS W A Reflections on Nigeria's economic growth. (Paris, Development Centre of the OECD, 1967) 75 pp (P).
NGA 104

A brief descriptive analysis of the Nigerian economy (using statistical data up to 1963); a critical appraisal of planning objectives prior to 1966; and some recommendations for future development planning, including stimuli to be applied to stagnant productivity in the agricultural sector. For the time being agricultural exports will continue to be the main engine of growth, determining how rapidly or slowly the rest of the economy develops.

GÜSTEN R Can the Nigerian economy grow at 6 per cent per annum in the near future? A pre-planning exercise. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1967, No.1, pp 11-32.) NISER Reprint Series No.40.
NGA 105

Assessment of growth possibilities should be prudently based on the past performance of the food-producing sector as far as the first years of the next planning period are concerned. This would involve planning for a growth of GDP of somewhat less than 5 per cent per annum initially, and gradually raising the target during the plan period to about 5.5 per cent towards the end. In this way the second development plan would be a transitional one, paving the way for a subsequent period during which the economy might actually grow at a 6 per cent rate without an inflationary rise in food prices. The author's econometric model, applied to the last six years for which basic data exist (1958-64) relates alternative assumptions about rates of increase in agricultural population, in production for on-farm consumption, in marketable surpluses, in demand for food in the non-food producing sectors, in the gap between marginal supply of and demand for food, in annual price increases (at an assumed price elasticity of demand of 0.66), and in growth of GDP. The crudeness of the model is stressed, especially the high degree of aggregation, as well as the need for analysis of other aspects of the economy (foreign exchange, domestic savings, availability of skilled labour, &c) before any definite conclusion can be reached.

OLAYIDE S J An aggregated seven-sector model of the Nigerian economy. ("Bulletin of Rural Economics and Sociology", Ibadan, 1968, No.1, pp 69-91.)
NGA 106

The mathematical framework of the input-output model presented has been designed to illustrate some of the practical values of the empirical approach in developing countries. Models of this kind may make possible realistic inferences about the likely future structure of a developing country. (WAERSA 2971/1968.)

ANON Agricultural development in Nigeria, 1965-1980. (Rome, FAO, 1965) 512 pp (P).
NGA 107

A comprehensive development plan, of which Part A lays down a framework for agricultural policy under the headings food, raw materials for domestic industries, and exports. Part B discusses policies and programmes for the development of agricultural production, water resources, and irrigation. Separate chapters deal with each main cash crop, by region; subsistence crops; grazing; fertiliser use and requirements; mechanisation; and livestock. Part C covers organisational and institutional aspects: extension services, education, statistics, land tenure and related social problems, farm settlement schemes, marketing, credit, and the supply of inputs. A final section deals with proposed changes in the organisational framework, federal and regional.

COPPOCK J T Agricultural development in Nigeria. ("Journal of Tropical Geography", Singapore, 1966, No.23, pp 1-18.)
NGA 108

Recent measures to improve peasant and plantation farming are described. Small but widespread advances in the former will result in large gains. Obstacles to progress are discussed. (Tropical Abstracts q628/1967.)

HELLEINER G K Peasant agriculture, government, and economic growth in Nigeria. (Yale University, Economic Growth Center, 1966) 600 pp.
NGA 109

Peasant agricultural production and its place in economic development are considered on pp 44-151. Marketing Boards and the extent of their stabilising effect on prices and incomes are discussed on pp 152-200.

WELLS J C Government investment in agriculture: some unsettled issues. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1966, No.1, pp 37-48.) NISER Reprint Series No.22.
NGA 110

Agriculture in the current Plan: a critical examination of goals and decisions and of capital and recurrent budget allocations (federal and regional). The role of the agricultural sector in development: definition of disguised unemployment in Nigeria, the measures which should be taken to mitigate it, and the institutional changes involved in such measures. Development measures within agriculture: the process of selective allocation of resources from annual budgets as well as capital allocations in the printed plan, and the mix of investment activities in future plans are discussed.

OLUWASANMI H A Agriculture and Nigeria's economic development. (Ibadan, Oxford University Press, 1966) 240 pp (P).
NGA 111

A description of the main social and economic aspects of Nigerian agriculture, of present resources, and of the pattern of production and marketing. The importance of investment in agricultural development for the industrialisation of the country is stressed. The means proposed for encouraging it are examined: change in farm organisation, research, and extension services.

GÜSTEN R Studies in the staple food economy of Western Nigeria. (Munich, Weltforum Verlag, 1968) 310 pp (P).
NGA 112

Part B presents a model of the effect, in the fairly short term, of structural changes in the Nigerian economy on the growth of demand for and supply of foodstuffs. See NGA 214.

STEWART I G *et al* Nigeria. Determinants of projected level of demand, supply and imports of farm products in 1965 and 1975. (Washington, DC, United States Department of Agriculture, 1962) 149 pp.
NGA 113

The study adopts a dual approach to the problem of identifying the determinants of future demand of a range of agricultural commodities. Chapters I and II deal with it in aggregate, macro-economic terms. Chapters II and IV consider it from a micro-economic point of view. In the first instance statistics of the Nigerian economy, and of the external trade on which its growth depends, are examined for the decade 1950-1960. On the basis of the relationship between the duty-paid value of imports and the export value (at producer prices) of 'Marketing Board' crops, approximate degrees of income demand elasticity are assessed for a number of imported foodstuffs. In the second, micro-economic, section the pattern of consumer expenditure is analysed on the basis of surveys made in the 1950's by the Federal Office of Statistics and the Federal Nutrition Unit, of some semi-independent regional surveys, and of the author's own pilot survey made in 1961. Chapter IV considers the evidence presented by these surveys of demand for selected imported commodities. Chapter V explores trends in supply of agricultural products and includes a note on future possibilities of import substitution through increased local production of both agricultural and manufactured goods. In conclusion the study attempts overall projections for 1965 and 1975 of some general magnitudes, including gross domestic product, population, per head income, consumer expenditure, and agricultural output. Given the difficulty of marrying the two aspects, macro- and micro-economic, observed in the first part of the study (due mainly to lack of evidence of the frequency distribution among the total population of the income and occupation groups whose consumption habits were analysed by the surveys, and thus of aggregating the surveys' findings at national level), the projection had to be based mainly on the macro-economic evidence.

OYENUGA V A Agriculture in Nigeria. (Rome, FAO, 1967) 309 pp.
NGA 114

A descriptive analysis: the importance of agriculture in the national economy; soil and climate; production of palm oil and kernel, coconut, cocoa, groundnuts, cotton, rubber, food crops, and livestock; and the marketing structure.

OLUWASANMI H A Bäuerliche Landwirtschaft und technischer Fortschritt.
NGA 115 (Peasant agriculture and technical progress.) (Wissenschaftliche Welt", Berlin, 1966, No.2, pp 14-20.)

The yields of agricultural crops and livestock are very low in Nigeria because the scientists are still not sufficiently concerned with the practical problems of agriculture. Some progress has been achieved with export crops but there has been little improvement in either breeding or cultivation methods with sweet potatoes, manioc, etc. There is no crop rotation other than 'bush fallow'. Arable areas are very small, with 55.2 per cent of the farmers cultivating 0.4-2 ha. and only 7 per cent more than 4 ha. In Japan yields 3-4 times higher are obtained per unit area by suitable choice of varieties and fertilisers. Social influences, the system of landed property which forbids land sales, and fixed connections of individual tribes with particular regions, makes rational solutions difficulty. (WAERSA 26/1968.)

LUNING H A Economic aspects of low labour-income farming. (Wageningen,
NGA 116 Centre for Agricultural Publications and Documentation, 1967) Agricultural Research Report, No.699, 137 pp (P).

A survey of a sample of peasant farms in a poor and heavily-populated area of Northern Nigeria provides part of the empirical data for this study of labour productivity in developing economies. (WAERSA 1570/1968.)

UPTON M Socio-economic survey of some farm families in Nigeria,
NGA 117 Part I and Part II. ("Bulletin of Rural Economics and Sociology", Ibadan, 1967, No.3, pp 127-183, and 1968, No. 1, pp 7-37.)

Part I describes the findings of a survey of 153 farm families in six villages carried out in the area south and west of the River Niger between June 1963 and May 1965. Records were kept for a complete year for each farmer of (a) social amenities; (b) resources of each farm, including land, trees, livestock, family labour, building and equipment, and finance; (c) production, income, and expenditure; and (d) farm practices, family structure, attitudes, personal possessions, and membership of societies. Methodology is described in detail. (WAERSA 968/1969.)

In Part II the results of the survey were used in production function analysis to derive estimates of marginal productivities. There is significant marginal product for arable land on account of labour and development costs. Land itself is freely available. For tree crops and livestock the data is insufficient to draw firm conclusions. The analysis for labour is involved and includes analysis of other sources of farm income. There is no evidence of zero marginal product of labour or disguised unemployment. There is an overall tendency for farm incomes and other incomes to be inversely related. (WAERSA 4131/1968.)

WHETHAM Edith Diminishing returns and agriculture in Northern Nigeria.
NGA 118 ("Journal of Agricultural Economics", Manchester, 1966, No.2, pp 151-157.)

Relatively simple innovations (e.g. improved husbandry techniques, the application of mineral fertilisers, &c) would improve farm production in Northern Nigeria and overcome the tendency to diminishing returns. (WAERSA 435/1967.)

HILL Polly The myth of the amorphous peasantry: a Northern Nigerian
NGA 119 case study. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1968, No.2, pp 239-260.)

The findings of an enquiry which attempted to measure the extent to which the population of the Batagawara village area was actually suffering from hunger during the weeks before the millet harvest seem to indicate considerable differences between farm holdings. The methodology of the enquiry is presented critically, its main purpose being to establish the existence rather than the causes of this economic inequality. But the author believes that much of it can be attributed to differences in intelligence and efficiency of individual farmers. This gives hope for the future since it suggests that the better-off farmers would be responsive to outside help, and might at the same time favourably influence the worse-off ones.

2. REGIONAL STUDIES

NORTHERN NIGERIAN GOVERNMENT. Development Plan 1962-1968. (Kaduna,
NGA 201 Ministry of Economic Planning) 112 pp (P).

A listing of programmes for agriculture, fisheries, and veterinary services (pp 7-24) includes measures for irrigation, soil conservation, land reclamation, farm training, research, and improvement of animal health.

ANON Road survey of Northern Nigeria. Economic feasibility and
NGA 202 technical report. (London, Scott & Wilson, Kirkpatrick & Partners/The Economist Intelligence Unit, 1964/Northern Nigerian Government Ministry of Works) 5 vols.

Vol.I Methods and Background (80 pp) presents cost benefit criteria, and estimates induced production value, gross and net. Vols.II and III consider the place of the road in the Development Plan, and present 46 individual road studies, which examine land-use, export and food crop production, marketing arrangements and price patterns in the area served by the road to be built or improved. Induced agricultural production of principal and minor crops is estimated by quanity and value. The Lake Chad road, to link the railhead at Maidugari with Abadam on the Niger frontier, and with spurs to Mallamfaturi and Baga on the lake shore, is dealt with at some length.

ANON
NGA 203
Road feasibility studies in Northern Nigeria. (London, Scott & Wilson, Kirkpatrick & Partners/The Economist Intelligence Unit, 1966/Northern Nigerian Government) 3 vols.

Vol.I examines the administrative, physical and economic background. Agriculture and related industries and livestock farming are described on pp 80-135. Data are given on the production, export, processing, prices, marketing and yields of groundnuts and cotton. There are notes on acreages and yields of other cash and food crops. Obstacles to development (illiteracy, land tenure, shortage of extension workers, and of fertilisers, pesticides and credit) are described. Costs and returns for use of fertilisers and pesticides are estimated. Numbers, marketing and processing of cattle and meat are described. Vol.II Description of and estimated induced production from areas to be served by five proposed roads: Shendam extension, Lokoja-Toto, Funtua-Mando, Hadeja-Nguru, and Kunya-Babura. The present and future economies of these areas are seen mainly in terms of additional exports of agricultural produce.

ANON
NGA 204
Lafia-Shendam road feasibility study. (London, The Economist Intelligence Unit/Scott & Wilson, Kirkpatrick & Partners, 1968/Northern Nigerian Government, Ministry of Works and Water Resources.)

A description of the agricultural economy of the area and estimate of extra output of export and food crops to be induced by the new road. An appendix discusses the appropriate prices at which it should be valued. The area beyond Shendam is considered separately.

BAWDEN M G & TULEY P
NGA 205
Land Resources of Southern Sardauna and Southern Adamawa provinces, Northern Nigeria. (Tolworth, Land Resources Division, Directorate of Overseas Survey, Ministry of Overseas Development, 1968) 89 pp (P).

Physical and human aspects of the environment are described, as well as the different land systems. Recommendations are made, for each land system (and according to whether normal or strict conservation measures are needed), as to its most suitable use: arable and mixed, grazing, or reservation.

UPTON M & PETU D A
NGA 206
An economic study of farming in two villages in Ilorin emirate. ("Bulletin of Rural Economics and Sociology", Ibadan, 1964, No.1, pp 7-30.)

The local social pattern, system of land tenure, and farming calendar are described. Variations in gross margin per acre and per man-day for the sample of 22 cash and subsistence crop farms between 1961 and 1963 are analysed.

MORTIMORE M J & WILSON J
NGA 207
Land and people in the Majo close-settled zone; a survey of some aspects of rural economy in the Ungogo District, Kano Province. (A report to the Greater Kano Planning Authority.) (Ahmadu Bello University, Department of Geography, 1965) Occasional Paper No.1, 119 pp.

Human and physical resources of a heavily-populated rural area economically dependent on Kano are described, followed by a detailed examination of agricultural practice, production and marketing, illustrated by case studies of farms and villages.

LUNING H A
NGA 208
An agro-economic investigation in the Marumaru-Kasarawa catchment area. (Gusau, Ministry of Agriculture, 1963) 27 pp.

This survey of the village of Tullawa is preceded by a general description of the area and of land-use and farming patterns.

Thirty informants provided data on the use of factors of production in agriculture. In a heavily-populated area there are considerable problems of land tenure and much off-farm employment. Quantitative data on inputs and outputs for the 1962 season are presented. Factors limiting production and the means to improve the very low standards of living are discussed.

LUNING H A
NGA 209
The rural economy of the upper catchment area of the Sokoto-Rima valley. (Gusau, Ministry of Agriculture, 1963) 64 pp.

A study made in connection with an FAO investigation into the water management of the Sokoto river system. Farm incomes and the production, consumption and local marketing of crops are discussed. The growth of the agricultural economy and the role of the agricultural services in the area are described.

MID-WESTERN NIGERIAN GOVERNMENT.
NGA 210
Mid-Western Nigeria Development Plan, 1964-1968. (Benin City, Ministry of Internal Affairs, 1965) 77 pp (P).

In the section dealing with primary production (pp 7-23) costs of development projects are estimated for rubber, oil palm, cocoa, cotton, tobacco, food crops, and livestock. There are recommendations on credit and research.

UPTON M.
NGA 211
Agriculture in South-West Nigeria. (Department of Agricultural Economics, University of Reading, 1967) Reading Development Studies, No.3, 115 pp.

The purpose of this study, carried out in six villages in four widely-spaced districts between 1963 and 1965 is (1) to describe patterns of agriculture and levels of productivity and consumption, and (2) to investigate relationships between social characteristics and agricultural production. (WAERSA 1926/1968.)

WESTERN NIGERIAN GOVERNMENT.
NGA 212
Western Nigeria Development Plan, 1962-1968. (Ibadan, 1962) Sessional Paper No.8, 74 pp (P).

In the section dealing with primary production (pp 13-24) general policy objectives are laid down for cocoa, oil palm, rubber, cotton, coconut, food crops, and livestock. There are recommendations on credit and research.

ANON
NGA 213
Western Nigeria road development survey. (London, Ove Arap & Partners/The Economist Intelligence Unit, 1966/ Western Nigerian Government, Ministry of Works and Transport) 2 vols.

Vol.I (355 pp) the future demand for transport facilities; human and natural resources, the pattern of agricultural produciion, foreign trade, and marketing and distribution are described. Future production and prices are estimated. Vol.II (721 pp in two parts) An evaluation of the feasibility of 24 major road projects and of 18 others dealt with in lesser detail. Forecasts are made in each case of economic activity with or without road improvements or construction.

GÜSTEN R
NGA 214
Studies in the staple food economy of Western Nigeria. (Munich, Weltforum Verlag, 1968/Ibadan, Nigerian Institute of Social and Economic Research/Munich, Ifo-Institut für Wirtschaftsforschung) 310 pp (P).

Part A synthesises published data on the staple food economy of Nigeria, with particular reference to Western Nigeria, examining in turn the changing structure of the population, of agricultural production, of food consumption, of the marketing and exports of staple foodstuffs. Part C analyses the pattern of flows of foodstuffs into selected towns and areas (Ibadan, Lagos, Benin City, and the Oshun-Ife-Ilesha triangle) and their implications for the policy of expanding food production in Western Nigeria. The trade in foodstuffs between each of 14 mainly producing rural areas and the major urban consumption centres is then examined. This is a largely statistical description, with some tentative interpretations of the flows and what they imply for future planning policy.

Part B presents a model of the effect, in the fairly short term, of the structural changes described in Part A on the growth of demand for and supply of foodstuffs. This is used by the author to examine the relationship between possible growth rates of GDP and of the non-agricultural sectors, rates of increases in the prices of foodstuffs, and differences between their marginal demand and marginal supply.

OLOKO O A study of socio-economic factors affecting agricultural
NGA 215 productivity in parts of Ondo province of Western Nigeria. (Ibadan, Nigerian Institute of Social and Economic Rssearch, 1965) 93 pp.

EASTERN NIGERIAN GOVERNMENT. East Nigeria Development Plan, 1962-1968.
NGA 216 (Enugu, Government Printer, 1962) Official Document No.8, 62 pp (P).

Objectives of the Plan, including priority to be given to agriculture and processing industries are set out on pp 8-11. Agriculture is dealt with on pp 13-14.

ANON Eastern Nigeria road development study. (London, Scott &
NGA 217 Wilson, Kirkpatrick & Partners/The Economist Intelligence Unit, 1966/Eastern Nigerian Government) 5 vols. (P).

Vol.1 Methods and Background (329 pp) includes a description of the agriculture of the region (pp 84-127) and of the activities of the Eastern Nigerian Development Corporation and of the Marketing Boards for palm oil and kernel, cocoa and copra. Expatriate investment is mainly in rubber. Forecast of production and export of palm products and rubber are given by five-year periods to 1990. Vol.3 (227 pp) Provincial studies. Vol.4 Provincial studies (pp 1-108) and road projects (pp 109-255). Each of the ten provincial transport studies, though principally concerned with the volume of traffic in terms of vehicle movements, includes a description of the flows, with tonnages, of the main crops.

WHITE H P 'Terre de barre': the basis of a West African agricultural
NGA 218 region. ("Bulletin de l'IFAN", Dakar, Jan.-Apr. 1965, pp 169-182.)

For summary see DAH 207.

3. LAND TENURE

LUNING H A The impact of socio-economic factors on the land tenure
NGA 301 pattern in Northern Nigeria. ("Journal of Administration Overseas", London, 1965, No.3, pp 173-182.)

Reasons for, and consequences of, increasing demand for land in the region are examined.

NORMAN D W Land and labour in three Zaria villages. ("Samaru Agricul-
NGA 302 tural Newsletter", Zaria, 196 No.3, pp 28-35.)

A study of land use and land tenure in three villages of Northern Nigeria situated on the outskirts of Zaria city. The effects on type of tenure, and on farm and field size, of distance from both the city and from the centre of each village are discussed. (WAERSA 4015/1968.)

ADEGBOYE R O
NGA 303
An analysis of land tenure structure in some isolated areas in Nigeria. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1966, No.2, pp 259-268.)

270 farmers were interviewed in 8 villages. Restrictions on the alienation of land by the land tenure structure were, along with lack of credit facilities and inadequacy of extension advice, said to be the main impediments to agricultural development. (Topical Abstracts q604/1967.)

ADEGBOYE R O
NGA 304
Farm tenancy in Western Nigeria. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1966, No.3, pp 441-453.)

A survey of 712 farm tenancy arrangements. (WAERSA 429/1968.)

LLOYD P C
NGA 305
Yoruba land law. (London, Oxford University Press, 1962/ Nigerian Institute of Social and Economic Research) 378 pp (P).

The nature of customary law and its relationship with the social and political structure of the various Yoruba sub-groups are described and analysed.

UDO R K
NGA 306
The migrant tenant farmer of Eastern Nigeria. ("Africa", London, 1964, No.4, pp 326-338.)

A mainly sociological study with economic implications. (WAERSA 1159/1965.)

4. CO-OPERATIVE FORMS OF ENTERPRISE

HANEL A
NGA 401
Genossenschaften in Nigeria. (Co-operatives in Nigeria.) (Marburg/Lahn, Eukerdruck KG, 1967) 153 pp (P) (English summary pp 140-151.)

History, development by regions during the period of regionalisation, and trends and problems between 1952 and 1965, of co-operation in Nigeria are described. Rural co-operatives have been multi-purpose, or have been exclusively concerned with marketing of produce or with group farming. There are also sections on thrift, loan and thrift, credit, and consumer co-operatives.

5. CAPITAL AND CREDIT

OLUWASANMI H A & ALAO J A
NGA 501
The role of credit in the transformation of traditional agriculture: the Western Nigerian experience. ("Bulletin of Rural Economics and Sociology", Ibadan, 1964, No.1, pp 58-74.)

From a general consideration of the important role of credit in agricultural development the authors proceed to a case study of the operations between 1956 and 1963 of a random sample of 22 out of the 209 Local Loan Boards acting for the Western Region Finance Corporation. They conclude that farm credit schemes have only limited effect so long as they are operated without due regard to the earning capacities of the enterprises or of the innovations being financed. Crop loans in particular have merely tended to sustain borrowers in their subsistence economy.

COHEN H
NGA 502
Social organisation and credit in a West African cattle market. ("Africa", London, 1965, No.1, pp 8-20.)

A descriptive analysis of credit sales in Ibadan market, where outstanding current debt always amounts to about £100,000. (WAERSA 1567/1965.) See also GHA 908.

AKINWOLEMIWA J O The value of supervised credit in the Western
NGA 503 Nigeria Agricultural Credit Corporation. (Ibadan, Ministry of Agriculture and Natural Resources, 1965) 26 pp.

Description of the activities of the Corporation and of the principles upon which it operates.

6. LIVESTOCK PRODUCTION

FERGUSON D S The Nigerian beef industry. (Ithaca, N.Y., State
NGA 601 College of Agriculture, 1967) Cornell International Agricultural Development Bulletin No.9, 86 pp (P).

The cattle-raising and marketing situation in Nigeria is described, and prospects for an increase of beef production considered. Most of the 7.5 mn. cattle are owned by semi-nomadic herdsmen tribes in the tsetse-free regions of the north; between 850,000 and one million head are annually brought to the market. Most of the demand is in the south and the highest rate of increase in demand is expected here. Recommended measures to increase beef production include improvement of rail transport to the south, grazing and stocking regulations in the north, fodder conservation, encouraging the trade in dried meat, changing the attitude of herdsmen tribes to cattle ownership, and changing the tax structure in order to obtain a higher annual rate of extraction. (WAERSA 2309/1968.)

FERGUSON N W Nigerian livestock problems. (From "Markets and
NGA 602 marketing in West Africa", proceedings of a seminar held at the Centre for African Studies, Edinburgh University, April 1966, ed. ORD W H et al, pp 81-95 (including discussion).)

A brief summary of obstacles to production (mainly veterinary) and of marketing and distribution problems.

WERHAHN H et al The cattle and meat industry in Northern Nigeria.
NGA 603 Report of a survey concerning production, trade, and allied industries (Frankfurt/Main, 1964).

Text of the report by a team of German experts to which reference is made by NIVERD C in a report on market outlets for Niger cattle and meat in Nigeria (NIG 602).

ANON Profitability of pig-farming in Nigeria. (Nigeria,
NGA 604 Inbucon Limited, 1963) 70 pp.

An assessment of the potential profitability of the pig-farms belonging to a large agricultural and industrial undertaking (part of a wider appraisal of the group's activities). An initial investigation revealed erratic production, overstocking, a high mortality rate due to nutritional deficiencies and shortage of feedingstuffs, and carcase weight and type ill-adapted to market demand. Feeding experiments, including use of alternative local ingredients, were instituted in order to obtain a more favourable conversion ratio. A stock control system was set up to ensure adequate purchase and storage of feed to carry the farms through the critical months of local shortage. An improved balance of pigs to acreage was calculated and procedures to prevent over-stocking introduced. Outlets were sought for surplus pigs and new contracts negotiated with existing buyers.

ABAELU J N
NGA 605

Costs and returns of private commercial egg production in the Ibadan urban area: a pilot investigation. ("Bulletin of Rural Economics and Sociology", Ibadan, 1964, No.1, pp 75-85.)

Costings of a (statistically unrepresentative) sample of 7 out of Ibadan's 111 commercial laying flocks in 1962-63 disclosed an average profit margin per dozen eggs of 10.4 pence over a 52-week period, ranging between a loss of 7.2 pence and a profit of 27.0 pence. In all cases housing was in battery cages and feed was mash compounded in a government-owned plant. The government's price policy is criticised as arbitrary and related to no cost criteria, retail prices being either set too high (in relation to costs), so as to check consumption, or subject to such fluctuations as to discourage production. Either way expansion of production of an important source of protein is prevented. Lower prices should be compensated by making available compound feeds and stock replacements at lower cost, still leaving a reasonable gross margin to the efficient producer. To encourage poultry-keeping by peasant farmers, the opportunity cost of whose labour can be reckoned as low or nil, overheads could be reduced below those of the sample by use of simple deep-litter housing instead of high-cost cages, and by co-operative egg-marketing.

7. CROP PRODUCTION

MANN W S
NGA 701

A note on agricultural production and land use objectives of the Federation of Nigeria. (Rome, FAO, 1967) 16 pp.

Data are given on the gap between consumption per head and the proposed expansion of the area of land under cultivation, with related production targets. The capabilities and productive potential of the land are assessed, and targets set for more intensive land use including higher yields of food crops and industrial crops. (FAO 01190/1967.)

VON BLANCKENBURG P
NGA 702

Afrikanische Bauernwirtschaften auf dem Weg in eine moderne Landwirtschaft. (African peasant economies and the beginnings of a modern agriculture.) ("Zeitschrift für ausländische Landwirtschaft", Frankfurt/Main, Sonderheft, 1965, No.3, 112 pp.)

Two studies of agricultural innovation. In the first, the economic effects of rubber cultivation on three villages in the Benin region are analysed: changes in land tenure and occupation; developments in marketing and labour organisation; changes in income, expenditure and consumption; evolution of the farmers' mentality, adoption of co-operative ideas and technical innovations; supply responses. In conclusion, future problems of organisation, farm structure, management, research, and extension services are also considered. The second study examines the effects on traditional agriculture of the introduction of rice-growing in the Abakaliki area. Present situation and principal problems are discussed. A generally willing acceptance was found among farmers, the Ibos being especially receptive to change, assisted by the availability of land and the flexibility of the social and tenurial system.

WELSCH D E
NGA 703

Response to economic incentives by Abakaliki rice-farmers in Eastern Nigeria. ("Journal of Farm Economics", 1965, No.4, pp 900-914.)

Regression analysis on data of physical quantities of inputs and outputs of a sample of holdings producing rice and/or yams in 1963 confirms that the farmers were on the whole allocating efficiently the available factors of production. The switch from yam to rice production in the area since the end of World War II was seen to be in response to economic incentives. In the absence of quantitative data on savings and investments, statistical analysis of farmers' investment decisions was not possible, but general observation suggests a tendency to maximise returns to scarce resources.

LUNING H A
NGA 704
Patterns of choice behaviour on peasant farms in Northern Nigeria. ("Netherlands Journal of Agricultural Science", Wageningen, 1967, No.3, pp 161-169.)

A budget analysis on 28 peasant farms showed that, subject to the primary objectives of self-sufficiency in food, the proportion of cash crops to subsistence crops was mainly determined by maximum cash income expectation. All land not allocated to groundnuts was planted to cereals as a hedge against low yields and none left fallow. (WAERSA 600/1968.)

WHETHAM Edith
NGA 705
Diminishing returns and agriculture in Northern Nigeria. ("Journal of Agricultural Economics", Manchester, 1966, No.2, pp 151-157.)

Relatively simple innovations such as improved husbandry techniques and application of mineral fertilisers would improve production and overcome the tendency to diminishing returns. (WAERSA 453/1967.)

STOKES A R
NGA 706
Increasing productivity on upland farms. Mechanisation and its effects. Economic aspects. ("World Crops", London, 1963, pp 444-450.)

A comparison of production costs per acre on 15- to 20-acre holdings of groundnuts and of sorghum and maize using tractor power, four different methods of animal traction, and handwork. In the case of both crops the cost of tractor work was the highest, handwork the second highest (at 3.5s per day), and 1-2 row complete multi-purpose tool-frame the lowest. Improved ox-drawn implements which can be used to take advantage of the greater yield potential of tied ridge farming offers the biggest opportunity for increasing the small farmer's productivity.

EZEDINMA F O C
NGA 707
The soya bean in Nigeria. (Proceedings of the Agricultural Society of Nigeria, 1965, Vol.3, pp 13-16.)

ANSCHEL K R
NGA 708
Problems and prospects of the Nigerian rubber industry. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1967, No.2, pp 145-159.)

Costs and returns on smallholdings, the influence of extension services, and the unsatisfactory market situation are all examined. (WAERSA 1825/1968.)

ESSANG S M
NGA 709
The lessons of the cocoa crisis. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1967, No.2, pp 235-242.)

The causes of the crisis and the lessons learnt from it are considered. A realistic appraisal of the country's policy toward the development of cocoa in particular and cash crops in general is needed. (WAERSA 2347/1968.)

BERG B R
NGA 710
Nigeria, Senegal and the Congo (Kinshasa). The projected level of demand, supply and exports of oilseed products to 1975, with implications for US exports to the EEC. (Edmonton, Manning-Berg Research Associates, 1967) 78 pp.

An analysis of the economic, social and political background factors which might influence the development of the oilseed situation in the three countries to 1975. (WAERSA 2587/1967.)

KRANENDONK H C
NGA 711

A preliminary report on the rural changes in the savannah area of the Western State of Nigeria, with special reference to tobacco production. (Ibadan, NISER, 1968) 42 pp.

Technical and organisational aspects of production of flue-cured tobacco in the northern part of Western Nigeria are considered, and an assessment made of the effects of tobacco-farming in the area on farming practices, production of food crops, employment of labour, and farmers' attitudes and outlook. The importance is stressed of good communications, an adequate labour supply, efficient extension services, and the adaptability of farmers. The report which 'gives some idea of the particular set of conditions which have led to the development of a particular rural area', should not be taken as a model.

ANON
NGA 712

An evaluation of tropical fruit production and processing potential in Western Nigeria and a suggested prerequisite programme. (Ibadan, A.D. Little Inc., 1965/Project and Technical Assistance Department, Premier's Office, Ministry of Trade and Industry, Western Nigeria, 1965) 25 pp.

8. IRRIGATION

ANON
NGA 801

The Niger Dams Project. (The Hague, Nedeco/London, Balfour Beatty and Company, 1961/Federal Government of Nigeria, Niger Dams Authority.) Vol.I, Part 7, Agriculture, 103 pp and Tables.

A description of the current agricultural situation (climate, population, the agrarian system) is preceded by soil and vegetation surveys. Estimated costs are given for pump irrigation schemes which would require an extensive canal system connected with the Jebba dam. This is in any case only to be oonstructed at a later stage after completion of the Kainji dam. The agricultural potential of the Niger Flood Plain between Jebba and Lokoja is assessed. Of a total area of 434,000 ha., 240,000 ha. or more are suitable for development of peasant food and cash crops. Estate agriculture would produce mainly sugar and fibres. Tree crops could also be introduced or improved on smallholdings, and the possibility of effective control of trypanosomiasis opens up the prospect of mixed farming. A net area of 200,000 ha. is irrigable, of which about a quarter could be irrigated at a reasonable and economic cost by pumping from the Niger, or by gravity from water derived from the upper tributaries. Three alternative cropping patterns for wet season and dry season are suggested. All three involve double-cropping on the estates; the second and third involve double-cropping of rice and other seasonal crops and of pasture on the smallholdings. The need is stressed for a number of years of field research before a pattern emerges which can be introduced and demonstrated to peasant farmers.

9. MARKETING/CONSUMPTION

OGUNSHEYE A
NGA 901

Marketing Boards and the stabilisation of producer prices and incomes in Nigeria. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1965, No.2, pp 131-143.)

Fluctuations in producer incomes (both in money and real terms) between 1948 and 1960 for palm kernels, palm oil, cocoa, and groundnuts are analysed. The effects on incomes of stabilising prices are discussed, but the author concludes that for a fuller interpretation more needs to be known about the supply elasticities of the commodities in question.

HELLEINER G K Marketing Boards and domestic stabilisation in Nigeria.
NGA 902 ("Review of Economics and Statistics", Cambridge, Mass., 1966, No.1, pp 69-78.)

The Boards have had most success in achieving intra-seasonal price stability, leading to orderly marketing, reduced speculation, and improved quality of produce. The degree of inter-seasonal instability of money producer prices has also been to some extent reduced in the case of groundnuts, palm oil, palm kernels, and cotton. Only for palm kernels were real producer prices effectively stabilised. No appreciable benefit can be said to have accrued to the economy as a whole, except for the greater stability of cocoa plantings which has resulted. Producer prices for cocoa, by contrast, remain the most unstable. Except for palm kernel producers, the Boards' policies aimed at stabilising farmers' incomes have been rather less successful. Incomes of groundnut and cotton producers have actually been destabilised. Success has also varied somewhat between regions. In conclusion, the Boards can be more easily defended as successful earners of tax revenue than as agents of stability.

HELLEINER G K The fiscal role of the Marketing Boards in Nigerian
NGA 903 economic development, 1957-61. ("The Economic Journal", London, September 1964, No.295, pp 582-610.) NISER Reprint Series No.5.

In the Western and Eastern regions the role of the Boards has changed from that of protector of the farmer's interests and stabiliser of his prices to that of collector of a portion of his income as tax for the use of the regional governments. After a critical examination of this role and the purposes to which the Boards' income has been devoted, the author concludes that a strategy of maximising trading profits, proper to the management of a monopolist Board, will continue in future to contribute, as it has clearly done in the past, to general economic development. Conversion of these profits into government revenue through export taxes will, however, place the responsibility of development policy and expenditure on the governments themselves, separating this from the other functions being performed by the Boards, such as intra-seasonal price stability, orderly marketing and so forth, which can more reasonably be considered to reflect farmers' interests. As direct taxation gradually comes to affect other sources of income there might occur a shift to a more equitable (and less distorting) tax structure. Finally, greater attention must be devoted to economic rationality of allocation of government expenditures.

HENNINGSON E F Report to the Nigerian government on egg and poultry
NGA 904 marketing. (Rome, FAO, 1967) UNDP Report TA No.2310, 44 pp (not released).

Statistics are given of production, consumption, foreign trade and market prices. Costs of transport and distribution are analysed. Recommendations are made on marketing arrangements and collection of market statistics. (FAO 00225/1967.)

GOPALAN K Report to the government of Nigeria on the marketing of
NGA 905 selected agricultural products in the Western Region (with particular reference to staple food crops). (Rome, FAO, 1967) UNDP Report TA No.2372, 19 pp.

Marketing of staple food crops, tobacco, fresh eggs, and coconuts is reviewed. Recommendations are made for a rotary copra-crushing mill and development of the coir industry. (FAO 00882/1967.)

ANTHONIO Q B O The supply and distribution of yams in Ibadan markets.
NGA 906 ("Nigerian Journal of Economic and Social Studies", Ibadan, 1967, No.1, pp 33-49.)

A detailed description. Transport and storage facilities are the main bottlenecks. (WAERSA 299/1968.)

AKEN'OVA M E & ANTHONIO Q B O The marketing of Ofada rice in Ibadan City: a pilot survey, Part I. ("Bulletin of Rural Economics and Sociology", Ibadan, 1968, No.1, pp 116-141.)
NGA 907

On the whole, the impression is given that the structural pattern of rice distribution is highly competitive and at the same time remunerative. There is free entry and exit and, more significantly, a process of growth in the distributive sector is indicated by the gradual accumulation of capital which enabled retailers to become wholesalers. Furthermore, some of these middlemen have moved away to other sectors of the economy after acquiring enough capital. The distributive sector is a growing and progressive part of the economy as far as Ofada rice in Ibadan is concerned. (WAERSA 2429/1968.)

ESSANG S M The middlemen in the domestic marketing of palm oil: asset or liability? ("Bulletin of Rural Economics and Sociology", Ibadan, 1968, No.1, pp 38-68.)
NGA 908

It is maintained that the pricing practices of the Palm Oil Marketing Board and its licensed agents greatly depress producer prices. Experience in the Okobo/Oron area indicates that there is no economic justification for the view that improvement of agricultural productivity in developing countries and increase in producers' income call for either the elimination of the middlemen and their replacement by state marketing institutions or a comprehensive regulation of palm oil distribution. (WAERSA 2438/1968.)

HODDER B W Rural periodic day markets in part of Yorubaland. ("Transactions of the Institute of British Geographers", London, 1961, No.29, pp 149-159.)
NGA 909

A description of very small-scale markets, whose great number and frequency nevertheless makes them a vital link in the marketing chain in the regions studied.

HODDER B W The Yoruba rural market. (In "Markets in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 103-118.)
NGA 910

The part played by women is specially analysed.

OTTENBERG S & OTTENBERG Phoebe Afikpo markets, 1900-1960. (In "Markets in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 119-169.)
NGA 911

Long-term trends in market patterns and activities are considered, but mainly a description of the situation in 1960.

HODDER B W Some comments on markets and market periodicity. (From "Markets and marketing in West Africa", proceedings of a seminar held at the Cnntre for African Studies, Edinburgh University, April 1966, ed. ORD H W et al, pp 97-108 (including discussion).)
NGA 912

The origin and nature of traditional markets in Yorubaland and factors affecting their location and frequency are examined.

SMITH M G Exchange and marketing among the Hausa. (In "Markets in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 299-334.)
NGA 913

An analysis of market operations, prices, and vendors in a number of markets in Northern Nigeria.

WRIGHT W D C A determinant of demand for food imports into West Africa. (In "African primary products and international trade", Edinburgh University Press, 1965, pp 117-124.) (P).
NGA 914

A quantitative examination of the relationship between export earnings from Nigeria and Ghanaian primary products and the level of imports. (WAERSA 1415/1966.)

GÜSTEN R
NGA 915
Studies in the staple food economy of Western Nigeria. (Munich, Weltforum Verlag, 1968) 310 pp (P).

Part C analyses the pattern of flows of foodstuffs. See NGA 214.

MANN W S & NWANKWO J C O
NGA 916
A case study of rural food consumption in Eastern Nigeria. ("Agricultural situation in India", New Delhi, 1965, No.4, pp 221-224.)

Findings of rural consumption surveys conducted in 1962-63 are summarised. They indicate a considerable shortfall in average food intake (1,687 calories) from the balanced diet of 3,017 calories recommended for the region: excessive starch, insufficient protein, low fat and oils, and small quantities of fruit and vegetables. Three possible solutions are considered: importing protein-rich foods, raising general income levels, and granting subsidies on certain foodstuffs. The first is short term. The foods would be beyond the pockets of the mass of the population, and even PL480 and other subsidised imports will not much affect rural consumption. The second, long-term, solution of raising consumers' purchasing power is the most appropriate. In the meantime subsidies paid on the inputs of rice-growing, poultry farming, and back-garden vegetable growing are proving useful.

ADU S A
NGA 917
Consumers' expenditure in Nigeria, 1950-1958. A regional analysis. (London University, School of Economics and Political Science, 1962) (unpublished thesis) 204 pp (typescript).

Includes an analysis of aggregate expenditure in each region for each year, of all major items of homegrown and imported food. During the period the food group represented between 68 per cent and 77 per cent of total consumer expenditure. There was a continuous trend upwards in the proportion spent on durables and other non-durables, and a parallel substitution of imports for home-produced goods and services. Expenditure on meat, fish, and eggs averaged 25 per cent of total food expenditure. The year-to-year instability in the availability of foodstuffs and in their prices was one of the most important determinants of the changes in overall personal expenditure (at constant prices) noted in the study. Proportions of regional totals of expenditure to totals for the Federation did not change much over time. The estimates are classified according to their degree of reliability, those for quantity and price and for household budget data being mostly 'B' (95 per cent chance of their error being less than 25 per cent). The following indices of aggregate food and total expenditure are given for the last four years of the period reviewed (at 1957 prices):

	1955	1956	1957	1958
Food expenditure	108.1	103.6	100.0	102.9
Total expenditure	103.6	101.7	100.0	104.1

ANON
NGA 918
Report of trade mission for agricultural equipment to Nigeria. (London, BNEC, 1966) 68 pp.

A brief summary of likely demand for tractors, agricultural machinery and equipment, chemicals, poultry, breeding stock, and pig and cattle equipment.

10. PROCESSING INDUSTRIES

ANON
NGA 1001
The industrial potentialities of Northern Nigeria. (Kaduna, Sir Alexander Gibb and Partners/Industrial and Process Engineering Consultants, 1963/Northern Nigerian Government/ UK Department of Technical Co-operation) 284 pp (P).

Prospects for each industry based on local raw materials are considered in detail: textiles, oilseeds, tanning, leather footwear, sugar and sugar by-products, tobacco, starch, glucose and allied products, jute bags, flour milling, cattle and meat marketing, fruit canning, brewing, and soft drinks.

ANON
NGA 1002
Food manufacturing and processing in Nigeria. ("Nigerian Trade Journal", Lagos, 1968, No.2, pp 64-72.)

An illustrated description of the structure of the baking, dairy, fruit and food canning, and margarine industries.

ZWANKHUIZEN M T H
NGA 1003
Agricultural industries for processing of raw materials in the Eastern Region. (Rome, FAO, 1963) ETPA Report 1741, 94 pp.

Possibilities are examined for increasing production and improving processing of coffee; improving and making more economically efficient the processing of cocoa; increasing output and improving processing of rubber; improving small- and medium-scale processing of palm produce; and developing rice-milling. Mainly technical recommendations.

KILBY P
NGA 1004
The Nigerian palm oil industry. ("Food Research Institute Studies", Stanford, Calif., 1967, No.2, pp 177-203.)

Production, uses, and processing methods are described. At present it is up to 3.25 shillings per cent cheaper to use highly labour-intensive systems of extraction which waste a large amount of the recoverable oil, than to use the big pioneer mill, which in 1964 ran at only 48 per cent capacity. A formula is proposed for increasing producer prices for palm oil to a level at which the incremental output of the advanced technique exceeds the adjusted incremental costs. This would enable the advanced technologies to bid the fruit away from the more primitive processors. Farmers would not suffer: additional payments for fruit would make up for loss of revenue for oil; unpaid domestic labour would be freed; and approximately 20 per cent more oil would be available for export.

KILBY P
NGA 1005
African enterprise: the Nigerian bread industry. (Stanford University, The Hoover Institution on War, Revolution and Peace, 1965) Hoover Institution Studies No.8, 112 pp (P).

The historical development of the industry and patterns of bread consumption are described. Other chapters discuss the economics of production, the structure of distribution, the extent of competition, and entrepreneurial patterns. The economic implications of official restriction on the entry of foreign enterprise, on whatever scale, into the industry, and of government support for an indigenous flour-mill are considered. The author concludes that in the baking sector labour-intensive enterprises are in general better suited to both the supply of factors and the demand for products. The level of economic and technical efficiency is, however, low, a high degree of entrepreneurial initiative, mobility, and responsiveness to economic opportunity not being matched by organisational capacity, persistence in everyday supervision, or interest in improving the quality of goods.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

DU SAUTOY P
NGA 1101
Community development programmes in Nigeria, Ghana and Sierra Leone. ("Développement et Civilisations", Paris, 1965, No.21, pp 25-31.)

A comparison of methods. (WAERSA 2969/1966.)

TAIWO WILLIAMS S K
NGA 1102
The confluence of extension education, agricultural extension and community development. ("Bulletin of Rural Economics and Sociology", Ibadan, 1967, No.3, pp 184-193.)

Three processes are needed jointly for the development of rural areas. Extension education stresses the professional development in formal study and in-service-training of the individual for improving rural conditions. Agricultural extension plans lay emphasis on disseminating technical information on agriculture and home economics and encouraging people to improve their practices. Community development stresses co-operative planning and group action. (WAERSA 4016/1968.)

GORDON J
NGA 1103
Inter-relationships in health, agriculture and community development ("Legon Agricultural News", Legon, 1967, No.4, pp 4-8.)

Limitations to Nigerian agricultural production are land fragmentation and declining fertility, the flight from the land of young men, and the poor health and diet of the village populations. Despite a high child-death rate, the population is increasing. The present piecemeal approach to the inter-related problems of agricultural production, health and rural welfare should be replaced by a village-based integrated rural development programme. (WAERSA 245/1968.)

ANON
NGA 1104
Farm settlement scheme in Nigeria: a progress report. ("Nigerian Trade Journal", Lagos, 1967, No.2, pp 60-68.)

Progress since 1960, and difficulties encountered, are reviewed for each region. (WAERSA 1884/1968.)

KRIESEL H C
NGA 1105
Some considerations bearing on international transfer of agricultural technology, with particular reference to poultry in Nigeria. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1966, No.2, pp 167-184.)

The author concludes that introduction of large-scale highly-specialised enterprises will contribute less to development than improvement of the small-scale indigenous-type industry in which transferable innovations are mainly associated with genetic qualities. (Tropical Abstracts q598/1967.)

GILL D S
NGA 1106
FAO socio-economic survey of peasant agriculture in Northern Nigeria: findings, implications, and recommendations relative to extension work. (Rome FAO, 1966) 293 pp.

Human and physical resources and the social and economic situation in seven separate districts and emirates are described. The aims and methods of agricultural extension services are analysed in considerable detail.

ALUKA S A
NGA 1107
The educated in business: The Calabar Home Farm - a case study. ("Nigerian Journal of Economic and Social Studies", Ibadan, 1966, No.2, pp 195-208.)

Although the situation is rapidly changing, scarcity of educated entrepreneurs is related to the availability of other employment opportunities in public service. (Tropical Abstracts q614/1967.)

OLUWASANMI H A *et al* Uboma: A socio-economic and nutritional survey of
NGA 1108 a rural community in Eastern Nigeria. (Bude, Geographical Publications Limited, 1966) World Land Use Survey, Occasional Papers No.6, 116 pp (P).

A description of a community development scheme and of results for 1965.

12. RURAL/URBAN RELATIONS

HUNT C L Study of the political, social and economic role of urban
NGA 1201 agglomerations in developing countries: Nigeria. (Working Paper No.25 for the 34th study session of INCIDI, Aix-en-Provence, September 1967) 15 pp (P).

Three main features of Nigerian towns are: (a) the close ties of kinship maintained between town and country dwellers. A survey in Lagos showed the large proportion of wives and children absent in their villages at any given moment, the women often retiring to the country for childbirth and their long period of lactation; (b) voluntary associations for social and welfare purposes, while assisting integration into city life, usually take the form of tribal mutual benefit unions; (c) contact is maintained with the land either by direct physical work or through farm enterprises employing hired labour. The disparity in incomes between town and country is large, farmers' incomes being assessed for tax at around £50 while unskilled urban labourers earn £75, and the highly-skilled £300. Clerks and teachers start at £240. Despite some recent change in emphasis and the inclusion of agriculture in school curricula, education is seen primarily as a step to urban employment, leading to the problem of the unemployed school-leavers many of whom have no industrial skills. Nigeria's tribal rivalries are transferred to the cities, where there has been little growth of any sense of national identity. Even in Lagos in a sample study of 126 families only one inter-tribal marriage was recorded.

OTITE K J O Modernising Midwestern Nigeria. (Working paper No.27 for
NGA 1202 the 34th study session of INCIDI, Aix-en-Provence, September 1967) 14 pp (P).

This study also underlines the close ties of kinship persisting between town and country. Recent measures of modernising the regional economy both by industrialisation and by raising agricultural standards are described.

MINER H M Urban influences on the rural Hausa. (In "Urbanisation and
NGA 1203 migration in West Africa", ed. KUPER H, Berkeley, University of California, 1965, pp 110-130.)

Includes a discussion of the effect on urbanisation of the transition from subsistence to cash cropping.

PORTUGUESE AFRICA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

PRESIDENCIA DO CONSELHO III Plano de Fomento. (Third Development Plan,
POR 101 1968-1973.) (Lisbon, Imprensa Nacional, 1968) Vols. III & IV (528 pp and 388 pp (P).) The Overseas Provinces.

For each of the provinces there is first a general description of its economy; the main objectives of the plan are stated;

and the means of financing the proposed investment programmes are outlined. The plan is then described in detail, sub-sector by sub-sector, with an indication of recent trends and current problems, a statement of objectives, the proposed allocation of funds, and a list of individual investment projects.

101A Part I Cape Verde Islands. With the general objective of promoting the transition from a subsistence to a cash economy and of gradually eliminating disguised unemployment in agriculture (the islands' main economic activity) a number of measures are proposed to build up exports, improve internal communications within and between the islands, and encourage co-operative and group farming. Major investments will be in means of improving yields of coffee and other export crops (including extension services); soil and water conservation; improvements in animal health and breeding (cattle, karakul sheep, pigs and poultry); irrigation for production of bananas and market-garden crops, either in plantations or within the framework of community settlement schemes; and in the development of credit for smallholders. Proposed industrial investments include manufacture of leather travel goods and shoes and a plant for distilling sugar alcohol, Feasibility studies will be carried out for a number of projects involving the processing of oilseeds, aloes, coconut, &c.

101B Part II Guinea. Current output and production methods are described for rain-fed rice, maize, and sorghum, cassava, groundnuts, oil palm, bananas, food crops, oilseeds, sugar, and rubber. The main objectives are to improve soil fertility through better techniques and elimination of widespread mono-cultural systems (mainly groundnuts), introduce better marketing and credit arrangements, and encourage co-operative or pre-co-operative forms of enterprise. Major investments will involve extension work and 'animation rural'; introduction of animal traction; reorganisation of tractor and machinery stations for the clearing of new land to facilitate expansion of the areas planted to oil palm, cashew, cassava, and (where adequate labour is available) to rice; establishment of a banana-breeding station on Bissau island; launching a campaign to encourage fruit and vegetable production; and improving breeding and veterinary services for dairy cattle, sheep and goats, and poultry. It is proposed to set up a 100-hectare experimental farm, irrigated from artesian wells, on which 25 families will be settled. Under the industrial investment programme plants are to be set up for the complete processing of groundnuts, extraction of coconut oil and palm oil, milling of cassava (1,280 tons for internal consumption in bread and 300 tons for export to Cape Verde), processing of honey and wax, and manufacture of soft drinks and industrial alcohol, and a craft leather industry instituted.

101C Part III São Tomé & Príncipe Islands. 90 per cent of the province's agricultural land is devoted to the production of export crops, which account for 95 per cent of its exports, chiefly to mainland Portugal: coffee, cocoa, coconut and palm oil, bananas, and pineapples. Livestock production is insufficient to satisfy internal demand for meat and dairy produce. The general objectives of policy should be local self-sufficiency in most foodstuffs; more efficient use of the local labour force (but with some continuing call on foreign labour); an increase in the number of economically viable family-type holdings; improvement, intensification and diversification of output of food and cash crops; organisation of farm credit; and a new tax structure based on productive potential. For these purposes extension and veterinary services are to be improved and wider use of fertilisers and pesticides encouraged. Some 300 families are to be settled on 4 to 5 ha. holdings. The relatively easy conditions for collection of local produce suggest profitable possibilities for the extension of agricultural processing industries, hitherto on a modest, and in some cases recently-declining, scale. Feasibility studies or pilot projects are therefore proposed for production of coco fibre; manufacture of fruit juices; banana drying; soap manufacture (a rationalisation and enlargement of current activity); processing of horticultural produce (tomatoes, beans); semi-manufacture of cocoa or production of cocoa-butter for the mainland chocolate industry; and manufacture of animal feeding-stuffs from cashew nuts.

101D Part IV Angola. A principal objective of the Plan is the diversification of agricultural production both by raising the land and labour productivity for traditional export crops (coffee, sisal, maize, oilseeds, cotton, beans, tobacco, and beeswax) and by introducing new crops. Coffee at present accounts for about 80 per cent of the value of agricultural exports. Production of tobacco is considered especially suitable for expansion, as well as that of fruit, for which improved export marketing and transport facilities are, however, essential. There is a large potential demand, internal and external, for meat, but a substantial proportion of the cattle population is still in the hands of graziers who are not yet within the market economy. The Fundo de Fomento Pecuária (Livestock Development Fund) now embraces some 200,000 head of cattle a year within its marketing activity. Spread of watering points and sanitary precautions will lead first to a more orderly type of nomadic production and eventually to permanent settlement in areas where this is possible. At present availability of meat supplies for urban consumption or export is much subject to annual variations in rainfall.

The Plan's objectives for Angolan agriculture may be summed up as: increased productivity and improved quality of output to satisfy export markets and rising internal demand; better extension services and infrastructure (especially a storage and refrigeration network); a lowering of input costs; improved marketing arrangements; adequate local processing facilities; wider availability of credit; promotion of co-operatives and producer groups; and agricultural education and rural social advancement.

Programmes designated for priority investment include: strengthening of administrative cadres; more research and development; a campaign for expanding fertiliser use, especially with rice, cassava, and groundnuts in Malanje, Luanda, Moxico, and Uíge districts, and with potatoes and pineapples in Cuanza Sul, and use of pesticides for cotton, coffee, tobacco, and wheat; small local group irrigation schemes; encouragement of a partial switch from subsistence to cash crops in the traditional sector; improvement of yield and lowering of acidity of oil from semi-cultivated palms through wider introduction of Collin hand-presses (in Zaire district, the acidity of locally-marketed palm oil has already been reduced from 40 to 60 per cent to 6 to 7 per cent by this means); intensifying the campaign for oxenisation; provision of machinery centres for contract work on holdings too small to justify investments in implements; extension of co-operatives, of which there were only a couple of dozen in the whole province when the Plan was drawn up.

Under the proposals covering livestock, 15 new veterinary cattle inspection points a year are to be established in Moçâmedes and Huíla districts. Better breeding-stock (based on imports from South Africa), AI centres, and veterinary advisory services, will encourage development of dairying. Improvements in breeding and animal health will be introduced in order to expand pig and sheep (mainly karakul) production. For poultry-meat and eggs, whose commercial production has been rapidly developed since 1962, there is need for a more effective market organisation (including sales promotion, improved statistics of supply and demand, and research in both internal and export markets), as well as for encouraging co-operative production and extending technical know-how.

Funds are allocated under the Plan for a widespread campaign of agricultural education and extension. Particular stress is laid on the need to increase yields and expand areas of cotton and cereals through improved plant breeding, wider use of fertilisers and pesticides, and soil and water conservation. A number of major irrigation schemes are to be put in hand in the Queva, Caraco,and Cunene valleys, the latter involving the development of very large areas of southern Angola and northern South-West Africa. Two new settlement schemes are proposed: in the sparsely-populated Camabatela plateau (150,000 ha.), where it is planned to set up 30 ranches comprising a minimum of 30,000 head of cattle, in which it is hoped that coffee producers in the neighbouring areas will acquire an interest; and in the Cuanza-Bengo area, where the detribalised population of Luanda district could be resettled on farms irrigated from a proposed new dam on the Quiminha. These schemes would be linked with existing settlement in the Cela area, where new holdings would also be created. The major development of cattle-raising (including transition from a nomadic to market economy) already put in hand in Huíla and Moçámedes districts will be extended to the whole of the south and to Benguela district. Finally, criteria are laid down for the expansion of agricultural credit. This will normally be made available through the Caixa de Creédito Agrícola de Provisões de Angola (CCAPA), which is allotted 150 mn. escudos under the Plan. Special grants, not exceeding a total of 50 mn. escudos, will also be available for financing structural changes deemed to have a particularly high marginal yield in improved output.

Projects for processing agricultural produce specified under the industrial section of the Plan include an abattoir and refrigeration plant at Nova Lisboa (maximum annual throughput 15,000 head of cattle); another between Malanje and Camabatela; a pig processing plant at Cela; dairy products plants at Nova Lisboa and in the Canda area; fruit and vegetable canning plants at Cela, Carmona, and in Bocoio 'conselho'; a plant in Huambo 'concelho' for fruit juice and in Moçámedes for tomato concentrate; a wheat flour mill at Luanda; a sugar factory near Lucala on the Cuanza river to make good mainland Portugal's expected deficit of 60,000 tons by 1970; a margarine and vegetable oil factory at Luanda (an import-saving enterprise to meet rising domestic consumption which was expected to reach 1,800 tons in 1968); also at Luanda a factory for 'pasta' products, internal demand for which will exceed 3,000 tons by 1972; and plants for purifying salt (at Lobito) and processing cashew nuts (at Ambrizete). Three new textile factories, producing cotton yarn and cloth garments at Luanda and Sá da Bandeira and footwear at Luanda, Benguela and Sá da Bandeira, will result in a considerable net saving in imports.

101E Part V Mozambique. Of the province's land under cultivation over 3 mn. ha. are divided into 1.5 mn. family smallholdings and 0.5 mn. ha. are shared between some 3,000 medium- and largeholdings. About two thirds of cultivated land is devoted to subsistence agriculture. Average yields and labour productivity are therefore low. Crops likely to show the most rapid returns to development measures are dry-land cotton, cashew nuts, coco palm, groundnuts, and bananas, and irrigated wheat, rice, maize, potatoes, forage crops and cotton. In the case of groundnuts, cashew nuts and dry-land cotton it should be possible to coordinate the necessary measures for raising output and to pool extension services. Bananas may be associated with citrus, but priority should be given to bananas. For this crop a marketing organisation covering the whole province will be essential. As far as cereals are concerned, studies have indicated that in the lower Maputo valley (south of Lorenco Marques) it should be possible by 1972 to produce, by means of small local irrigation schemes, an average of some 48,000 tons of wheat, 72,000 tons of rice, and 66,000 tons of maize a year, together with cotton and forage crops. Output of kenaf is particularly dependent on effective extension services and adequate processing arrangements, but it should be possible substantially to increase present annual output of 5,000 tons of fibre. Production of sugar, tobacco, tea, sisal, potatoes, castor, and cassava is expected to follow its present upward trend.

Six settlement areas ('zonas de povoamento') are designated for priority development, three in the north of the province, two in the centre, and one in the south. Three other areas are to be the subject for special development studies, one, of 50,000 ha., in the Messalo valley in the far north-east, the second a little further south on the borders of Delgado and Moçambique districts in the Malema valley, and the third covering the limited alluvial region of the Save valley in the south. All would produce rice, cotton, and kenaf, the first two by gravity irrigation and the third by pump schemes. None of the six priority zones involve irrigation schemes. Two with relatively high rainfall - around 1,000 mm. (39 inches) a year - (uplands round Villa Cabral near Lake Nyassa and in the northern part of Tete district) would be suitable for intensive horticultural crops, potatoes, tobacco, and cattle and pig production based on local maize. A third similar zone is designated in Manica and Sofala district up against the Rhodesian frontier. Two of the zones would be devoted to dry-land farming, mainly cotton (one in the north-eastern Delgado district and the other in Zambézia along the Malawi frontier). The sixth settlement area on the Rhodesian side of Inhambane district round Malvérnia, between the Limpopo and the Save, would involve extensive cattle-raising and a network of watering points. The Plan also lists a number of irrigated areas, where settlements ('colonatos') are already established, requiring measures for their adaptation and extension, and for crop diversification: the Maputo, Incomáti, Limpopo, and Save river valleys in the south, and those of the Pungue and Búzi to the north of the Save. The Limpopo settlement will benefit from a dam to be built on its tributary, the Elefantes, at Massingir. It is intended that 15,000 new immigrants, about 4,000 families, with assisted passages from the mainland, should be resettled during the Plan period, together with some 120,000 indigenous families. For four of the settlement areas estimates are given of additional output of cereals and cotton to be expected from the development schemes.

Quantitative targets for 1973 for the province as a whole imply substantial increases in total volume of output compared with 1965. On the basis of estimates of output for that year (which are, however, presented with considerable reserve), increases over the Plan period aimed at by means of raising both yields and areas under cultivation are:

cotton	(dry-land)	(+ 82 per cent)	(+111,000 ha.)
maize	(dry-land)	(+ 20 per cent)	(+ 97,700 ha.)
maize	(irrigated)	(x 18)	(+ 35,200 ha.)
bananas		(x 7)	(+ 8,000 ha.)
citrus		(15,000 tons from nil)	(+ 1,000 ha.)

Output increases aimed at from higher yields alone are cashew nuts, 35 per cent, rice (irrigated) 74 per cent, wheat (irrigated) 1,300 per cent, cotton (irrigated) 23,000 tons from nil, forage crops (irrigated) 218,000 tons from nil, groundnuts 64 per cent, and citrus 18,000 tons from nil.

The target for meat production involves an almost 50 per cent increase in the beef cattle herd, from 1.133 mn. to 1.664 mn. head. The commercial dairy herd would go up by 8,200, and output from traditional herds by 1 mn. litres to bring total milk production to 16.4 mn. litres. It is hoped to raise output of game meat by ranching methods to an annual value of 7.5 mn. escudos. Such an expansion of livestock production requires larger and more efficient veterinary services, and the Plan also recommends studies on marketing, price, and storage policies; distribution, processing, and grading; development of sheep, goat, and pig production; credit; and the means of enlarging holdings.

Part V of the Plan concludes with a list of measures in the spheres of production (fertilisers, plant breeding, extension services, credit, &c.), marketing (prices - including guarantees for groundnuts -, research for exports, co-operatives, subsidies and special freight rates for producers in settlement zones), and processing (co-operatives). No details are given of investment planned in processing industries. Aids of a general kind for training management and for market research are proposed, and the need for maintaining close relations between processors and producers is stressed.

MASSART J J & SUETENS Nicole   L'espace commun portugais. (The Portuguese
POR 102   economic area.) (Brussels, Institut de Sociologie, Université Libre de Bruxelles, 1969) 156 pp (P).

Part I describes the economy of the major components of the Portuguese economic area, mainland Portugal, Angola, and Mozambique. Part II deals with the escudo zone as a whole, its output, trade, and development planning. Data to 1967 are included for agriculture, forestry, and livestock-raising in each of the two major African provinces (Angola, pp 53-57; Mozambique, pp 83-87) and for the food, drink, and textile industries (Angola, pp 65-66; Mozambique, pp 91-92). In both countries the structure of the economy is markedly dualist, with the primary sector still the major one, and with a much swollen tertiary sector. This is, however, not the obstacle to economic growth which it constitutes in many developing countries, thanks to the important part played in the economy of each country by the transit services rendered to its landlocked neighbours (and, increasingly in the future, through transfers of energy).

CONTE P   Problèmes économiques dans les provinces portugaises
POR 103   d'Afrique centrale. (Economic problems in the Portuguese Central African provinces.) ("Tiers-Monde", Paris, 1964, No.2, pp 165-209.)

The political and constitutional framework of the provinces is described, as well as local government financing and monetary arrangements within the escudo area. The agricultural situation (pp 184-190) in Angola and Mozambique reflects the strongly dualist economy. Official statistics (those quoted are no more recent than 1961) give no indication of the proportion in which the benefits of increasing agricultural production are shared between the 11 mn. Africans of the territories and the colonists and plantation companies. Some estimates are, however, given of the volume of products marketed by the indigenous and European sectors respectively.

MARQUES W   Problemas do desenvolvimento económico de Angola. (Problems
POR 104   of Angola's economic development.) (Luanda, Junta da Desenvolvimento Industrial, 1964) 2 vols. 789 pp (P).

A description of the country's social and economic structure. History, general characteristics, present economic importance, location, and potentialities (not quantified) are presented for agriculture, forestry and livestock-raising (pp 172-268) and for the agricultural processing industries (pp 320-365). The past and recent situation in each district is described, and proposals made for future action and financing. Development poles are suggested. An analysis of the agricultural problem stresses the low productivity of smallholdings and the need for the introduction of animal traction and mechanisation.

CORREIA DE ARAUJO A   Aspectos do desenvolvimento económico e social
POR 105   de Angola. (Aspects of economic and social development in Angola.) (Lisbon, Junta de Investigações do Ultramar, 1964.) Estudos de Ciências Políticas e Sociais No.75, 214 pp (P).

The section on agriculture comprises a statement of problems of agricultural and livestock production, processing and marketing, capital and credit. There are also chapters on community development and agricultural co-operatives.

SAMPAYO D'OREY J D Contribuicão para um estudo macro-económico da agricultura de Portugal Tropical - provincias africanas. (Contribution to a macro-economic study of Portuguese tropical agriculture: the African provinces.) (Lisbon, Instituto Superior de Ciências Sociais e Política Ultramarina, 1966) (thesis) 276 pp.
POR 106

A descriptive analysis, based on statistics for 1951-1959, of agriculture in Cape Verde Islads, Guinea, S.Tomé and Principe Islands, Angola, and Mozambique.

PÖSSINGER H Landwirtschaftliche Entwicklung in Angola und Moçambique. (Agricultural development in Angola and Mozambique.) (Munich, Weltforum Verlag, 1968/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.31, 284 pp (P).
POR 107

An introduction sketches Portugal's historical role in Africa, briefly assesses the effects, both practical and theoretical, of changes since 1950 in the relationship with its African colonies (now 'provinces' of greater Portugal); and describes the economic and social extent of the multi-racialism established there. For each country there is a fairly detailed description of the natural and climatic environment, of the demography, and of the role of agriculture in the economy. The author divides the countries into homogeneous zones (35 in Angola and 24 in Mozambique), whose main demographic, geographical, and economic features are listed and commented on. Separate chapters describe the modernised and traditional sectors.

In Angola the more developed sector contains plantations and ranches besides a number of smallholdings. Some of these, like the 'colónias' of the Huíla uplands, date from the 19th century; others are of more recent origin, such as the 'colonato' of organised immigrants founded in 1951 at Cela in Cuanza Sul district. Also near Cela are the so-called free settlements of Azore islanders formed during the 'fifties. Two examples of traditional systems of agriculture are given: that of the Bailundu in Central Angola, engaged in crop husbandry, as representing the predominant Ovimbundu ethnic group, and that of the Cuanhama in the south, who are Ovambo, and associate cultivations (mainly pulses) with extensive livestock-raising.

Mozambique's modernised sector also consists of plantations and smallholdings. Livestock husbandry is mostly on a small scale and associated with crops, and ranching has only recently been introduced. Settlement schemes (the large 'colonatos' in the Limpopo and Revué valleys) differ from those in Angola in being both fully irrigated and multi-racial. A substantial part of the traditional sector in the southern part of Mozambique has been brought into the market economy by means of some 30 co-operatives, four groups of which are described. Subsistence agriculture is illustrated by an analysis of the monthly harvesting programme and cash budget of three sample families in different areas of the north.

The author concludes with a brief description of Portuguese development policy and an assessment of its methods and aims.

VON TSCHIRSCHKY O Die Entwicklung derLand- und Forstwirtschaft in Angola. (The development of agriculture and forestry in Angola.) ("Material-Sammlung der Agrarsoziale Gesellschaft", Göttingen, 1967, No.60, 86 pp.)
POR 108

The pattern of agriculture and its place in the economy are described. Future measures to improve the agrarian structure should include intensification of agricultural production and concentration on technical research as well as realistic resettlement schemes for the African population. The work of the Agricultural Research Institute at Chianga is discussed and the Cela land settlement scheme is examined. (WAERSA 1064/1969.)

DA SILVA RÔLO J
POR 109
Reordenamento rural em Angola (contribuição para o seu estudo. (Contribution to the study of rural development in Angola.) (Estudos Políticos e Sociais", Lisbon, 1966, No.4, pp 1453-1592.)

The effects on development policies of the administrative reforms of 1961, and achievements to date in each district, are discussed and examined.

BORCHERT G
POR 110
Die Wirtschaftsräume Angolas. Transport-probleme und Rentabilitätsgrenzen der Produktion. (Angola's economic zones and areas of profitable production,and transportation problems.) (Hamburg, Deutsches Institut für Afrika-Forschung, 1966) Hamburger Beitrage zur Afrika-Kunde, Vol.6, 143 pp (P).

The first part of the study consists of a detailed description of rail, road and air transport, their structure, volume and tariffs (data mainly to 1964). The second part establishes for a number of primary export products geographical limits within which their costs of production may be considered competitive on world markets in terms of fob price at Angolan ports. Agricultural aroducts analysed are coffee, sisal, sugar, cotton, and maize.

MENDES A
POR 111
O trabalho assalariado em Angola. (Wage-labour in Angola.) (Lisbon, Instituto Superior de Ciências Sociais e Política Ultramarina, 1966) 506 pp (P).

An introductory section describes current labour legislation, international and Portuguese, and the geographical distribution of the employed Angolan labour force. Chapter II (pp 77-257) consists of a detailed analysis of the rural labour force: the labour market, workers' motivation, productivity and incentives to raising it, wages, and general conditions of employment. Statistical series extend mostly up to 1964.

BAIÃO R J
POR 112
Brief glimpses of labour questions in the Portuguese province of Angola. ("Trabalho",Luanda, 1964, No.8, pp 85-101.)

A summary is given of the recently-introduced Rural Labour Code on wages and conditions of work and welfare services. International comparisons are presented of duration of agricultural work, wages, and cost of basic foodstuffs in developed and developing countries, including Angola.

REDINHA J
POR 113
A empresa familiar agrícola tradicional (Angola). (The traditional family farm enterprise in Angola.) ("Trabalho", Luanda, 1967, No.17, pp 197-203.)

A descriptive study.

DA SILVA D
POR 114
Problemas relevantes do trabalho rural. (Rural labour problems.) ("Trabalho", Luanda, 1964, No.8, pp 73-84.

Taking Dando 'concelho' as an example (it comprises over a quarter of the area, but under 10 per cent of the population of Luanda district, and thus attracts immigration), the author considers the economic, social, and financial criteria for encouraging, and psychological attitudes to be adopted by employers towards,permanent rather than seasonal migration of rural workers to both plantation and industrial enterprises in the area.

FER[illegible]IRA A
POR 115
Panorama económico-agrario de Moçambique. (Agro-economic survey of Mozambique.) ("Fomento (Técnica e Economia Ultramarinas)", Lisbon, 1967, No.3, pp 173-200.)

A description by districts of geography, climate, population agricultural production and number of holdings. The place of agriculture in Mozambique's foreign trade, with its excessive reliance on sugar, sisal, copra, and tea, is examined. The advantages and shortcomings of the current situation are assessed, and desirable developments in crop diversification, farm credit, and animal traction suggested.

RITA-FERREIRA A Estrutura da população activa em Moçambique. (The
POR 116 structure of the working population in Mozambique.) ("Ultramar", Lisbon, 1964, No.16, pp 43-74.)

A study of the socio-economic dualism of Mozambique. The distribution of the labour force is analysed by industry and by district, and comparisons made with other African and with European countries. The age structure is described. In 1950, 77.1 per cent of those employed in the traditional sector were occupied in primary activities, and 69.6 per cent of those in the modern sector in tertiary activities. Of 862,000 employed persons, 184,500 were in agriculture; 500,000 out of 695,000 classified as self-employed were farmers. The importance for the future of reducing the proportion of migratory labour is stressed.

BARROS A B Aspectos da produtivadade da agricultura em Moçambique.
POR 117 (Aspects of agricultural productivity in Mozambique.) (Lisbon, Instituto Superior de Ciências Sociais e Política Ultramarina, 1965) (thesis) 179 pp.

Factors influencing agricultural productivity are discussed, and land and labour productivity in the traditional sector are analysed, by administrative districts. Production indices for each district are presented. Besides geographical and climatic factors, a number of other causes of low productivity are identified: a preference for work in other more remunerative sectors (this varies considerably from district to district); a failure to combine cattle ownership with cash crop production; lack of communications and market outlets; profitability of smuggling; and various sociological influences (the matrilinear societies in the north tend to show higher productivity). The move towards a cash economy and the demonstration effect of expatriate holdings are also noted.

PICADO HORTA C A Analise estrutural e conjuntral da económica da Guiné.
POR 118 (The Guinea economy: structure and situation.) ("Boletim Cultural da Guiné Portuguesa", Bissau, 1965, No.80, pp 333-497.)

Demographic statistics and indices of industrial production (including processing of rice, groundnuts, meat, and fish) are given, to 1964, but details of agricultural output to 1962 only. Trade figures to 1964/5. Aggregate income and expenditure are shown under a number of main headings. Food accounted for 70 per cent of family expenditure in 1962. Obstacles to development are summarised, particularly the marketing structure and low level of managerial and entrepreneurial ability.

DE ALBUQUERQUE SARDINHA R & PICADO HORTA C A Perspectivas da agricultura,
POR 119 silvi-cultura e pecuária na Guiné. (Outlook for agriculture, forestly, and livestock-raising in Guinea.) ("Boletim Cultural da Guiné Portuguesa", Bissau, 1966, No.83, pp 241-306.)

A follow-up of POR 114. A description of current agricultural research, education (at all levels), extension work, and 'animation rurale'. Development plans in general and a few individual schemes are also described. Situation of livestock-raising (including veterinary services) and poultry production. The need for adequate marketing arrangements (Marketing Boards in English-speaking African countries serving as a model) and farm credit is stressed. No quantitative projections of output are presented.

2. REGIONAL STUDIES

CATANHEIRA DINIZ A O planalto de Camabatela: uma característica zona
POR 201 natural do norte de Angola. (The Camabatela plateau, a typical natural region of northern Angola.) ("Agronomia Angolana", Luanda, 1966, No.23, pp 3-9.)

A brief assessment is made of development possibilities for livestock-raising. The region is due east of Luanda, has good road communications to the north and south, and is therefore accessible to centres of demand for both livestock and crop products, including groundnuts, maize, pineapples, potatoes, and cassava.

NETO J P
POR 202
O Baixo Cunene. Subsídios para o seu desenvolvimento. (Proposals for the development of the Lower Cunene.) (Lisbon, Junta de Investigações do Ultramar, 1963.) Estudos Ciências Políticas et Sociais, No.68, 217 pp (P).

The natural and human resources, history, and native customs of a 'concelho' in south-west Angola, mainly inhabited by the Cuanhama tribe, are described. Priorities for a development plan for the area are suggested, including the need for conservation of the waters of the Cunene and Cubango rivers. Possibilities of expanding output of cattle and food crops, and of developing mixed farming are examined (pp 139-165), and financing of agricultural and social development (including education and health) discussed.

MARTINS AFONSO A
POR 203
Povoamento agrário no ultramar Portugués. O aproveitamento agro-social da Inhamissa em Moçambique. (An agricultural settlement in overseas Portugal. The social and agrarian structure of Inhamissa, Mozambique.) ("Boletim Geral do Ultramar", Lisbon, 1963, Nos.454/455, pp 71-92.)

Description (1960) of an irrigated area of the Lower Limpopo, comprising 1,700 family holdings in 1957, and producing mainly rice marketed co-operatively), maize, and beans. Capital cost of irrigation was 1,830 contos (1.83 mn. escudos) per cultivated hectare. Costs of production and income per hectare are also estimated. Family expenditure was 6,000 escudos for a family of four (no source given) of which food 3,747 (including imputed value of subsistence crops 2,749 and purchases 988), clothing 1,060, hygiene 97, agricultural requisites 216, cattle (one yoke of oxen every 5 years), miscellaneous (tools, school books,&c.) 305, and tax 275.

3. LAND TENURE

JANNETTONE G
POR 301
Il regime fondiario in Angola. (Land tenure in Angola.) ("Africa", Rome, July-Sept. 1964, pp 133-139.)

A descriptive analysis.

4. CO-OPERATIVE FORMS OF ENTERPRISE

FERRINHO H
POR 401
Cooperativismo a mais sólida base da promoção rural africana. (Co-operation, the most solid basis for rural development in Africa.) (Lourenço Marques, Sociedade de Estudos de Moçambique, 1 .65) 87 pp (P).

Description of the work of a cotton co-operative set up through the Instituto Algodão de Moçambique at Maguco (Maxele-Guijá).

6. LIVESTOCK PRODUCTION

LIMA PEREIRA J
POR 601
Fomento da bovinicultura em Angola. II: fomento económico. (The development of cattle production in Angola. Part II: economic development.) ("Fomento,Técnica et Economia Ultramarinas", Lisbon, 1967, No.2, pp 173-200.)

Second of two articles, of which the first dealt with technical aspects. Forward-looking veterinary and breeding policies must be complemented by improved arrangements for distribution and processing of meat and dairy products and for farm credit. Shortage of investment capital is an important obstacle to the development of an activity which could be both a net import saver (viz. the potentially higher yields of imported breeding stock) as well as a promoter of exports. The author comments favourably on the activities of the Rhodesian Cold Storage Commission, which provides inspection and extension services in addition to its marketing and export role. Cattle-raisers in Angola have up till now had more limited access to finance than, for instance, entrepreneurs in the tertiary sector, and public investment in infrastructure has been in contrast to the capital starvation of agriculture. The future lies with extensive ranching, at any rate until better market prices provide an economic return on intensive systems, but there is scope for the development of dairy enterprises in climatically suitable areas.

SILVEIRA DA COSTA C   O estabelecimento do ensino agrario na provincia de
POR 602   Moçambique. Suas vantagems. (The advantages of establishing
agricultural education in Mozambique province.) ("Boletim
Geral do Ultramar", Lisbon, May 1965, pp 53-111.)

Though mainly concerned with the problem of forming cadres capable of developing forestry, fisheries, and crop and livestock husbandry, the study includes a brief appraisal of future cattle requirements. In order to ensure that 30 per cent of an average ration of 35 gr. of animal protein per head of the population per day should be in the form of red meat and 10 per cent in the form of dairy products, the author estimates that 8 mn. head of cattle would be required to feed Mozambique's population of 6.5 mn. In 1959-60, the main cattle areas were Lourenço Marques district, with 214,000 head, Gaza (433,000), Tete (147,000), Inhambane (80,000), Zambézia (63,000) and Manica and Sofala (46,000). 70 per cent of the country's total potential grazing area of 0.5 mn. sq. km. is at present affected by tse-tse. Its eradication would open up new areas in Sul de Save (some 40,000 sq. km.), on the Vila Cabral-Niassa plateau, and round Barué and Massingire.

PINTO DA CRUZ H A   Sobre pecuarização de alguns animais selvagems, sua
POR 603   integração no desenvolvimento sócio-económico de Angola.
(The herding of certain wild animals and its part in the
social and economic development of Angola.) (Lisbon,
"Pecuária", 1967, No.25, pp 41-53.)

Possibilities, advantages, and obstacles (mainly of transport and veterinary control), and legislation for conservation and control, are considered. Commercial development of wildlife could provide a valuable supplement to domestic meat supplies which, between 1962 and 1965, increased in only 4 out of Angola's 15 districts: Cuanza-Sul, Huambo, Huíla, and Moçamedes.

7. CROP PRODUCTION

SANTARENO J A   Possibilidades de elaeicultura da Guiné Portuguesa.
POR 701   (Prospects for vegetable oil production in Portuguese
Guinea.) ("Boletim Cultural da Guiné Portuguesa", April
1965, pp 155-171.)

Soil and climate are generally suitable for palm oil production in the coastal area and islands, especially in the south, but introduction of hybrid varieties is needed if present oil output is to be expanded. Experimental farms have indicated the possibility of obtaining yields ten times greater than those of unimproved varieties. No estimates of total potential output are given.

DEVEZA M C   O gergelim. Situação mundial da produção e do comercio.
POR 702   A posição de Moçambique como produtor. (Sesame: world
production and trade, and Mozambique's position as a producer.) ("Gazeta Agricola de Moçambique", Lourenço
Marques, 1968, No.225, pp 34-42.)

World data from FAO sources. More detailed figures for Mozambique, where sesame is mainly grown by smallholders in the northern districts. In 1961 the total crop of some 2,100 tons from 4,000 ha. indicates low yields. The crop is not very remunerative. However, since sesame is widely grown, efforts should be made to raise yields. (WAERSA 3399/1968.)

BENTO CORREIA C O amendoim na Guiné Portuguesa. (Groundnuts in Portuguese Guinea.) (Lisbon, Instituto Superior de Ciências Sociais et Política Ultramarina, 1965) 112 pp (P).
POR 703

Though second to rice in total output, groundnuts constitute Guinea's main export crop. Technical aspects of production, its structure, and the nature of land tenure (mainly related to the tribe and the family) are described. Of 87,000 holdings. Under 4 per cent of the 87,000 holdings are over 10 ha. The median size of holding is between 1 and 2 ha. Arrangements for credit, transport, marketing and local processing are discussed. About 60 per cent of groundnut exports are to the escudo area, predominantly to mainland Portugal.

GOUVEIA A O coqueiro. Suas possibilidades na economia da Província. (The outlook for coco - palm in the provincial economy.) ("Actividade Económica de Angola", Luanda, 1i67, No.78, pp 41-54.)
POR 704

In the light of the world demand and supply situation for palm products, which is reviewed, it is concluded that production would be economically justifiable in Uíge district (north-east Angola) and would also contribute favourably to the province's balance of payments problems.

MENDES FERRÃO J E Da bananicultura nacional, realidades e perspectivas. (Situation and outlook for Portuguese banana production.) ("Boletim da Junta Nacional da Marinha Mercante", Lisbon, 1968, No.68: Gabinete de Planeamento e Integraçâo Económica: Fomento Frutícola do Ultramar) 24 pp.
POR 705

Climatic and economic features affecting output, problems of marketing and sea transport, and future possibilities for production, are summarized for Madeira, Cape Verde Islands, S.Tomé and Príncipe, Angola, and Mozambique. The chaotic structure of the import trade in mainland Portugal is described: 199 firms, of which only half-a-dozen have any substantial turnover, are at present engaged in importing 42,000 tons annually. There is a lack of properly-equipped stores and much of the ripening is carried out on a minimal and wasteful scale. Freight rates are relatively high: to a producer price of 2.55 esc./kg. in Maderia are added costs of 1.69 esc. and exporter's profit margin of 0.30 esc. making a total of 4.54.

In Angola the producer receives 0.50 esc./kg. Total freight and other charges give a price cif Lisbon of 4.65 esc. for bananas packed in wooden crates and of 4.19 for those packed in cardboard cases. In 1967 76.5 per cent of imports were from Madeira.

MENDES FERRÃO J E & MENDES JORGE A F Acerca de bananicultura Angolana. (Concerning banana production in Angola.) (Lisbon, Ministério do Ultramar, Gabinete de Planeamento e Integraçâo Económica, 1969.)
POR 706

The world situation of banana production and trade is described. In Angola bananas are grown mainly along the coast from Cabinda southwards to the 14th parallel. Production for export is centred round Luanda in the north and Lobito in the south, with 1,500 ha. and 600 ha. of commercial holdings in the two areas respectively. In the south predominantly small holdings market through co-operatives. The traditional sector comprises about 5,000 ha., of which nearly 60 per cent is in the Cabinda enclave. 94 per cent of export is now in specialised banana boats, and in 1969 for the first time all bananas were packed in cardboard cases. The high quality of fruit required on European markets raises the problem of disposal of export rejects. Alternative methods of processing these are discussed. The author estimates an annual export crop of 100,000 tons in the relatively near future. Even with a substantial reduction in retail prices from present levels, mainland demand is unlikely to exceed 80,000 tons. Imports from Madeira, which enjoys a competitive advantage owing to its proximity to the mainland, no special boats being needed, will soon reach 40,000 tons, and increasing exports are to be anticipated from the other African provinces. The penetration of markets outside the escudo area, demanding high quality and competitive price, is therefore essential. Recent levels of cif prices in most Western European countries,as well as in Morocco and Japan, however, indicate that current Angolan fob prices would not, without a considerable lowering of present freight rates, prove competitive there. The need for larger banana boats and improved port handling facilities in Angola is evident.

ASCENSO J C & OLIVEIRA E S Aspectos ténico-económicos do fomento da
POR 707 produção de banana em Moçambique. (Technical and economic aspects of the development of banana production in Mozambique.) ("Agronomia Moçambicana", Lourenço Marques, 1967, No.2, pp 75-90, No.3, pp 109-125; 1968, No.1, pp 1-8.)

Part I Present situation. Some 60,000 peasant farmers grow bananas for home use and local markets. In addition there are 4,000 ha. of medium-sized farms growing for export. Yields are generally low, from 7 to 20 tons per ha. per year. From 1962 to 1966 exports averaged 16,000 tons, mainly to South Africa. Exports of 100,000 tons are planned by 1973. No bananas are processed locally. Part III Outlook for Demand. Data of world trade, and an indication of prospective markets for Mozambique. Part III Basic problems and proposals for solving them. Problems in the main production districts, Lourenço Marques and Gaza, Manica and Sofala, Zambésia and Moçambique, include food control, land use mapping, varieties, multiplication of stock, diseases and pests, and extension work. Raising of capital, transport trade organisation, and establishing of processing units are also examined. (WAERSA 3409, 3521, 3893/1968.)

MILHIERO A V Fomento da produção de citrinos em Moçambique. (Develop-
POR 708 ment of citrus production in Mozambique.) ("Agronomia Moçambique", Lourenço Marques, 1967, No.4, pp 163-176, 1968, No.2, pp 71-83.)

Part I Present situation. Peasant production involves some 2 mn. trees; 5,000 ha. are grown for export production on medium-sized to large farms. About two-thirds are oranges, a quarter grapefruit, and the remainder mainly tangerines and lemons. Some 65 per cent are in the Lourenço Marques district, which exports via South Africa, and in the Manica/Sofala district which exports under its own brand names. Total exports in 1966 were 9,500 tons, of which oranges and grapefruit each accounted for 4,700 tons, Belgium, the UK and mainland Portugal being the main buyers. There are nine packing houses and four small juice extraction plants, one of which produces essential oil. Part II Outlook for consumption, and promotional methods. A brief analysis of world trade prospects and of measures to be taken for promoting the local citrus industry. European markets have the capacity to consume greater quantities of Mozambique citrus. (WAERSA 3410/1968, 467/1969.)

DIOGO A A industria dos adubos in Angola. (The Angolan fertiliser
POR 709 industry.) ("Actividade Económica de Angola", Luanda, 1967, No.3, pp 29-38.)

Fertiliser use increased at a rate of about 25 per cent per year between 1963 and 1967, in which year 23,000 tons were imported. The best prospects for local production lie with super-phosphates. There is a possibility of pirites and sulphur deposits being located in considerable quantity. Lack of internal demand at present inhibits production of nitrogen, but, with ample power supplies, there are export possibilities, especially for urea, for which transport costs are lower.

9. MARKETING/CONSUMPTION

PENA A J
POR 901
Habitos alimentares africanos. (African food consumption patterns.) ("Boletim do Instituto de Angola", Jan.-Aug. 1966, pp 117-127.)

An introductory section describes the general characteristics of traditional African diet and food preparation. In north and east Angola cassava provides the main basis of diet. Meat or fish sauces with vegetables and condiments act as an appetiser to the consumption of large quantities of cassava porridge ('pirão'). Millet is the basic food in central and in most of southern Angola, but its nutritional value is lowered by removal of the pericarp and germ. In Serpa Pinto the grain is first soaked to promote germination before threshing and then soaked again before grinding. In the far south the Cuanhamas have maize, elsewhere used mainly for brewing, for their basic diet, supplemented with milk. Urban diet is more sophisticated, tending towards greater uniformity, and closer to European patterns, but still contains more maize- than wheat-bread and palm oil rather than olive oil and butter. In Luanda the Muceques consume at least once in the day bread, fresh fish, maize meal, onions, palm oil, tomatoes, and sugar; olive oil and dried beans about every three days; and every four days potatoes, butter, macaroni, and dried fish. There is no day-to-day consumption of lard or rice.

10. PROCESSING INDUSTRIES

CORREIA RAMALHO A
POR 1001
A industrialização da castanha de caju: o cajuerio e os seus produtos. (Industrialisation of the cashew nut: the acacia and its products.) (Lourenço Marques, Servicios de Económia de Estatistica Geral da Provincia de Moçambique, 1963) 270 pp (P).

A description of the nut, its properties, production, marketing and processing, with special reference to Mozambique. The world market outlook and that in the escudo zone are examined. In Mozambique it is estimated that there is a potential annual output of 25,000 tons of nuts, and 15,000 tons of CNSL, plus by-products from the pear and shell.

ANON
POR 1002
Mozambique: développement des industries de préparation de la noix de cajou et des plantations d'anacardium. (Development of cashew nut processing industries and cashew plantations in Mozambique.) ("Bois et Forêts des Tropiques", Paris, 1965, No.103, p 73.)

A description of present development and future output. (WAERSA 2417/1966.)

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

NIEMEIER G
POR 1101
Die moderne Bauernkolonisation in Angola und Moçambique und das Portugiesische Kolonialproblem. (Modern farm settlements

in Angola and Mozambique and Portugal's colonial problem.) ("Geographische Rundschau", Brunswick, 1966, No.10, pp 367-376.)

The present stage of development, extent, and location of the settlements is described. The longest established covers 31,000 ha. in the Limpopo valley, its 1,000 white and 500 black (1,000 by 1969/70) families being housed in 14 multi-racial village communities. There is a detailed description of the farming systems, including areas of each type of crop per family. The majority of the white settlers are from the Tras-os-Montes region of north-east Portugal, many being illiterate.

DE PASSOS GUERRA A J Reordenamento rural in Angola. (Rural develop-
POR 1102 ment in Angola.) ("Ultramar", Lisbon, 1966, No.25, pp 42-85.)

Rural development is considered mainly in its legislative and administrative framework, at regional and local level. The importance is stressed of a reliable demographic and agricultural census, of primary education (which should be designed to discourage as far as possible an automatic drift to the towns), of agricultural extension services, and of training agents for community development with an all-round understanding of economic, social, and technical problems.

GOUVEIA FRANCO C Da utilidade e viabilidade dos métodos de desenvolv-
POR 1103 imento communitário em programas de promoção sócio-económica em algumas regiões de Angola. (The usefulness and viability of methods of community development in planning for social and economic betterment in certain regions of Angola.) (Lisbon, Instituto Superior de Ciências Sociais et Política Ultramarina, 1966) 176 pp (P).

The author describes community development schemes in three different 'concelhos' concerned mainly with improving health, housing, and water supplies, and with the social education of women. He discusses the relevance of the methods employed and experience gained for wider schemes of economic and social betterment, whether in multi-racial small-town societies or in traditional African ones. The extent to which community development can be worked into the existing political and administrative structure of the province, or to which it will be necessary to train specialised staff to promote it, is examined.

DE CASTILHO SOARES A Política de bem-estar rural em Angola. (Rural
POR 1104 welfare policy in Angola.) (Lisbon, Junta de Invetigaçoes do Ultramar, 1961) Estudos de Ciências Políticas e Sociais No.49, 277 pp (P).

A description of community development programmes and rural education. A third section analyses problems of urbanisation and of the absorption of detribalised Africans into the urban environment.

RHODESIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

PHILIPS J *et al* Report of the advisory committee on the development
RHO 101 of the economic resources of Southern Rhodesia, with particular reference to the role of African agriculture. (Salisbury, 1962) 484 pp (P).

Part I assesses the problems and potentialities of the social setting and of the economy of Southern Rhodesia. A programme is presented of proposed developments and their estimated cost. Part II comprises the technical chapters. Chapters VIII to XXI (pp 91-342) deal with agriculture, forestry, and livestock-raising, including separate chapters devoted to wildlife, fisheries, and irrigation.

SADIE J L Report on planning for the economic development of
RHO 102 Rhodesia. (Salisbury, Government Printer, 1967) 49 pp (P).

High priority is to be given to the development of output from the African subsistence sector (pp 19-23), and of water resources (pp 23-26.)

YUDELMAN M Africans on the land. Economic problems of African agricultural development in Southern, Central, and East Africa,
RHO 103 with special reference to Southern Rhodesia. (Cambridge, Mass., Harvard University Press/London, Oxford University Press, 1964) 287 pp (P).

Rhodesia's dual agricultural economy and the effects of the Land Apportionment Act are described. Land tenure, labour, capital, prices, and marketing are discussed in the context of African agriculture. Future prospects for African farmers in the three regions of Africa are briefly assessed.

HARRISON J E Farm economics, with particular reference to farm manage-
RHO 104 ment. ("Rhodesian Journal of Economics", Salisbury, 1967, No.2, pp 39-51.)

The economic position of agriculture in Rhodesia is surveyed primarily from the viewpoint of the farm-management economist. The author concludes that long-term national production and marketing plans are essential to improve agriculture's low profitability: it is adequately capitalised, but there is considerable mis-investment. (WAERSA 1668/1968.)

MASSELL B F & JOHNSON R W M Economics of smallholder farming in
RHO 105 Rhodesia. A cross-section analysis of two areas. (Stanford, Calif., Food Research Institute, 1968) 74 pp (P).

The two samples of farms analysed are drawn from the Chiweshe Reserve and the Mount Darwin Native Purchase Area respectively. Productivities and the efficiency of resource allocation, as well as farmers' motivations, are analysed and compared. The implications of authors' findings for future government policy are tentatively suggested. Methodological issues are also dealt with at some length. The role of the production function as an empirical tool, and its limitations, are discussed in the light of its application in the present study.

JOHNSON R W M Disguised unemployment and the village economy.
RHO 106 ("African Social Research", Lusaka, 1967, No.3, pp 228-233.)

A survey conducted by the author in Rhodesia, together with other information on disguised unemployment, indicates no strong evidence of zero marginal returns to labour in subsistence agriculture. There is evidence of seasonal unemployment in the village, but many villagers in more accessible areas have used this opportunity for adding to their income by taking dry-season employment elsewhere. (Tropical Abstracts q2604/1957.)

5. CAPITAL AND CREDIT

KIRKPATRICK C The role of the African Loan and Development Company in
RHO 501 the field of African agriculture. ("Rhodesian Journal of Economics", Salisbury, 1968, No.2, pp 22-27.)

Lending operations by the Company since its establishment in 1964, and the stimulus given to production through its distribution of seeds, pesticides, and fertilisers, are described. This season crop finance reaches only some 900 farmers and it is recommended in the national interest to establish an agricultural credit organisation with government backing. (WAERSA 3586/1968.)

6. LIVESTOCK PRODUCTION

HORWOOD O P F (Chairman) et al Report of the Commission of Enquiry into
RHO 601 the beef cattle industry of Southern and Northern Rhodesia. (Salisbury, 1963) 163 pp (P).

Part I describes the place of the industry in the economy of each country: the supply and demand situation; marketing arrangements; and government policy. Part II makes recommendations on consumer price policy; producer prices and market guarantees; competition and control of marketing; exports; canning; grading and inspection of meat; hook auctions; the role of the Cold Storage Commission; the African cattle industry; and the future of production and marketing.

7. CROP PRODUCTION

DUNNETT Sir G S (Chairman) et al Report of the Commission of Enquiry
RHO 701 into the sugar industry. (Salisbury, Government Printer, 1962) 56 pp (P).

Production, processing, and distribution of sugar are described. The problem is discussed of increasing direct consumption, against the background of excess of supply over demand. Recommendations are made on the reorganisation and development of the industry, on the control of imports and of internal marketing, and on price and other regulations.

13. STATISTICAL SERVICES

ANON A sample survey of African agriculture 1959/60. (Salisbury,
RHO 1301 Central Statistical Office, 1962) 11 pp and Tables.

The methodology for measuring crop areas and yields, and cattle numbers, is described. Comparisons are made with the 1948/49 survey and with European agriculture in 1959/60.

RWANDA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

DUMONT J et al Etude globale de développement du Rwanda et du Burundi.
RWA 101 (Comprehensive development study of Rwanda and Burundi.) (Brussels, AESED, 1961/EEC) 292 pp (P).

In view of the intention of the two countries to assume separate political identities, the study, made just before independence, deals as far as possible separately with the development problems of each. Since these have much in common, however, the establishment of a Joint Commission, consisting of ministers from each state, to co-ordinate both planning and action is strongly urged. Agriculture occupies a major part of the study (pp 123-263). Proposals are made for developing production of food crops and livestock, coffee, tea, pyrethrum, tobacco, and castor seed. There are special regional development plans for the Bugesera-Mayaga area south of Kigali, which straddles the frontier with Burundi, and for the Mutara area in the north-east.

REPUBLIQUE RWANDAISE Premier plan quinquennal de développement
RWA 102 économique et social, 1965-1970. (First five-year plan for economic and social development, 1965-1970.) (Kigali, 1964) 4 Vols. and Summary (86 pp).

Vol.1 (270 pp) Principal development problems and crash programme. Vols.2, 3 and 4 are sectoral studies. Vol.2 (260 pp) covers agriculture and forestry. Rwanda is notable for its geographical isolation, demographic pressures, and low level of economic activity. The agricultural section of the Plan deals in turn with problems of research, livestock-raising, staple food crops, and nutrition, plantation crops, soil conservation and land reclamation, and afforestation. On the assumption of rapid expansion the production index of plantation crops could reach 300 by 1970 (1964 = 100); given a slow rate, however, it would rise to 263. The main crop targets for 1970 (with 1965 production in brackets) are: coffee, 23,000 tons (11,000); tea, 1,520 tons (430); pyrethrum, 2,500 tons (500); cotton fibre, 500 tons (118); and malting barley, 2,000 tons (1,000).

HEIMO M C Réflexions sur les conditions et les perspectives du
RWA 103 développement économique du Rwanda. (Thoughts on conditions and future outlook for economic development in Rwanda.) ("Afrique", Geneva, 1968, No.1, pp 7-29.)

A general assessment of the situation and outlook.

MAILLAND P et al Etudes agricoles et économiques au Rwanda. Rapport
RWA 104 définitif. (Study of the agriculture and economy of Rwanda. Final report.) (Paris, BDPA, 1965/République Française, Ministère de la Coopération) 2 Vols. and Maps.

Vol.1 (122 pp) A descriptive analysis of Rwanda's natural and human resources and of the general and regional characteristics of its agriculture. Vol.2 (122 pp) examines production and marketing, crop by crop, and gives estimates of gross agricultural income. Aspects recommended for further study and action include: improvement of statistics; implications of the relative shortage of land; diversification of export crops and intensification of food production to prevent a further deterioration in nutritional standards; regional specialisation; improvement of marketing and of processing and storage equipment; development of employment opportunities outside agriculture to relieve the demographic pressures which will be making themselves felt in ten years time; development of an economic foreign policy taking account of Rwanda's dependence on good neighbourly relations.

JURION F & HENRY J De l'agriculture itinérante à l'agriculture
RWA 105 intensifiée. (From shifting cultivation to intensified agriculture.) (Brussels, INEAC, 1967) 498 pp (P).

For summary see COK 104.

4. CO-OPERATIVE FORMS OF ENTERPRISE

BURKHARDT M Note sur le mouvement coopératif rwandais. (Notes on the
RWA 401 co-operative movement in Rwanda.) (Paris, BDPA, 1965) 142pp.

Historical and sociological background, legal and fiscal status, and statistics (1962), of co-operatives (including consumer co-operatives). There are four producer co-operatives, three for coffee and one for tea. Trafipro ('Travail-Fidélité-Progrès' - work, loyalty and progress) is a mixed form of co-operative. A draft law for Co-operatives, published in 1963, was still under discussion in 1965 and subject to undesirable pressures from interested parties. The training of administrative cadres, so vital to the movement, has also been mixed up in inter-ministerial rivalries. The report makes recommendations on taxation, bank finance, supervised credit, and on mutual insurance schemes.

6. LIVESTOCK PRODUCTION

LEVIF J L'élevage au Rwanda. (Livestock-raising in Rwanda.)
RWA 601 (Paris, BDPA, 1964/Ministère de la Coopération) 68 pp.

Statistics of livestock numbers are given for 1963. Production methods and existing extension, veterinary, cattle-breeding, and research services are described. Urgent action is needed to preserve governmental cattle-breeding stations and experimental farms, to get veterinary services going again, and re-organise meat and milk supplies for Kigali. Recommendations are made for developing sheep, goat, pig, and poultry production; for adapting beef production to regional conditions, e.g., taking into account local population density and exploring the possibility of livestock-raising in the sparsely-populated Mutara and Gisaka districts; and for new investments in government farms and centres.

TROQUEREAU P J Q Les ressources animales du Rwanda. (Rwanda's livestock
RWA 602 resources.) (Paris, BDPA, 1965/République Française, Ministère des Affaires Etrangères) 2 Vols. and Annexes (81 pp) (P).

Vol.1 (107 pp) describes the current supply and demand situation (livestock numbers to 1963), the traditional pattern of livestock-raising, the organisation of veterinary services, and marketing arrangements for live cattle, meat, milk, and hides. Future problems of administration, animal health, cattle-breeding and feeding, and grazing are examined, and a development policy outlined. Vol.II Action proposed in the fields of administration,veterinary services, research into cattle-breeding and feeding, and for setting up dairies and abattoirs. The possibilities for mixed farming are explored, by regions. There are recommendations on development of animal traction, the setting up of various pilot projects, extension and education, and co-operatives.
A final section incorporates these objectives in a ten-year development plan, with a forward glance to potential output of livestock products in 1980.

REPUBLIQUE RWANDAISE, MINISTERE DE L'AGRICULTURE ET DE L'ELEVAGE.
RWA 603 Projet d'élevage en ranching destiné à la production de viande au Mutara (Nyagatare). (Plan for ranching cattle for meat production in Mutara (Nyagatare).) (Kigali, Service de l'Elevage, 1966) 36 pp.

A long-term plan for investment in pasture improvement, buildings and machinery over an area of 3,600 ha. Over a period of 12 years their stocking would be built up to 2,000 head of cattle. An accelerated investment plan, yielding 500 beasts a year at the end of only four years, was rejected on economic grounds. Local and export market outlets are examined. The Sahiwal/Ankole cross is considered to have the relatively greatest economic value. The report estimates that costs of production would be such as to enable meat to be sold on urban markets in Rwanda at no higher price than at present and at about a quarter the price of that now imported from Kenya.

DESCHUYTENER G L'importance et les possibilités de l'élevage au Rwanda.
RWA 604 (Present level of livestock production in Rwanda and future possibilities.) ("Annales de Gembloux", 1967, No.2, pp 61-76.)

Climatic and soil conditions in Rwanda naturally favour agricultural, and especially livestock, production. Currently the livestock population comprises (a) 500,000 cattle and (b) 400,000 goats, both at high stocking density but giving very low returns because of traditional husbandry. Suggestions for improving productivity include greater investment of foreign capital, e.g., in pest control and veterinary facilities, and processing (refrigeration, powdered milk, cheese products, &c.). Internal improvements may be generated through regional specialisation, greater fodder supplies, sanitary measures, genetic selection and improvement, better production, organisation of marketing, and introduction of educational and training facilities. (WAERSA 629/1968.)

7. CROP PRODUCTION

REPUBLIQUE RWANDAISE, MINISTERE DE L'AGRICULTURE ET DE L'ELEVAGE. Projet
RWA 701 de développement de la culture du pyrèthre au Rwanda. (Development programme for pyrethrum-growing in Rwanda.) (Kigali, 1965) 70 pp and Annexes.

Detailed investment plan, including technical programme and financing and marketing arrangements, for expanding production in the Bugonzi-Mulera region to 4,700 ha., mainly through peasant co-operatives, but including 900 ha. of expatriate plantations.

9. MARKETING/CONSUMPTION

ANON Le marché du Rwanda. (Markets in Rwanda.) ("Marchés
RWA 901 tropicaux et méditerranéens", Paris, 1967, No.1145, pp 2747-2790.)

A general survey of markets in all sectors.

LEURQUIN P Le niveau de vie des populations rurales du Rwanda-Urundi.
RWA 902 (Living standards among the rural population of Rwanda-Urundi.) (Louvain, Nauwellerts/Institut de Recherches Economiques et Socialies, 1960) 420 pp (P).

For summary see BUR 902.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

COLIN R & MOLLET A La participation au développement et les problèmes
RWA 1101 d'animation dans la République du Rwanda. (Participation in the process of development and problems of 'animation' in the Rwanda Republic.) (Paris, IRAM/Ministère de la Coopération, 1965/République Rwandaise) 96 pp.

Part I analyses the motivations, needs, and attitude of both individuals and basic social groups, and also examines emergent new social structures. Part II makes recommendations about the conditions, aims, methods, and broad lines of action for a programme of 'animation rurale'.

13. STATISTICAL SERVICES

JOLIVOT R
RWA 1301

Propositions en vue de l'organisation d'un service de statistiques en République Rwandaise et de l'établissement de son programme de travail. (Proposals for organising statistical services in the Republic of Rwanda and for establishing their plan of work.) (Paris, Ministère de la Coopération, 1964/République du Rwanda, Ministère du Plan, de la Coopération et de l'Assistance Technique)

Existing statistics, including those for agriculture, which are particularly inadequate, are analysed. Although livestock numbers can be to some extent estimated from returns made by the abattoirs, the valuable source of information previously provided by the systematic vaccination of cattle is no longer available now that this practice has ceased. Local censuses, being conducted mainly for fiscal purposes, are unreliable. Recommendations are made for training and staffing statistical services, including a special service at the Ministry of Agriculture.

SENEGAL 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DU SENEGAL. Deuxième plan quadriennal de développement
SEN 101

économique et social, 1965-1969. (Second four-year Plan for economic and social development, 1965-1969.) (Paris, Imprimerie Mozart, 1965) 544 pp (P).

Vol.I Introduction and Analysis. Vol.II The Plan. Vol.III Regional Programmes. Chapter 2 of Vol.II comprises the agricultural section of the Plan. The seven regional programmes are, except for Cape Verde, concerned mainly with rural development.

ANON
SEN 102

Rapport sur les perspectives de développement au Sénégal. (Report on development prospects in Senegal.) (Paris, CINAM, 1960) 2 vols. and 9 annexes, six of which deal with individual regions.

Chapter 6 (46 pp) of part II of the main report contains proposals for rural development covering the twenty years to 1980. Possible objectives deriving from the 1960 situation (whose main features are analysed) are confronted with proposals based on new thinking and a fresh outlook. These concern especially the stepping-up of food production to satisfy local demand and the diversification of the agrarian economy from its excessive dependence on groundnuts. They mainly involve a much wider use of animal traction, fertilisers, and irrigation.

SERREAU J
SEN 103

Le développement à la base au Dahomey et au Sénégal. (Development at the grass-roots in Dahomey and Senegal.) (Paris, Librairie Générale de Droit et de Jurisprudence, 1966) 359 pp (P).

For summary see DAH 102.

VARIOUS
SEN 104

Sénégal 1966, reconversion économique en cours. (Senegal: an economic revolution under way.) ("Europe, France Outre-Mer", Paris, 1966, No.433, pp 11-62.)

An illustrated progress report. Agricultural development is dealt with on pp 27-42.

PEHAUT Y
SEN 105
Les problèmes économiques du Sénégal. (The economic problems of Senegal.) ("Cahiers d'Outre-Mer", 1966, No.75, pp 234-272.)

A description of the new economic structure of Senegal and of the first and second development plans. (Tropical Abstracts q186/1967.)

BRIGAUD F
SEN 106
Connaissance du Sénégal: le Sénégal économique. (Survey of Senegal: Economic aspects.) ("Etudes Sénégalaises", Dakar, 1967, No.6, pp 1-145.)

Chapter 2 discusses the economic aspects of agriculture, animal husbandry, and fisheries, with a separate section for each of the principal crops. (Tropical Abstracts q1949/1967.)

LA ROSA J L & BELMONT M
SEN 107
Enquête agricole 1960-61. (Agricultural survey, 1960-61.) (Paris, Ministère de la Coopération/INSEE) 88 pp (P).

Report on stratified sample survey. Structure of holdings, agricultural population, crop areas, livestock numbers, equipment.

PAQUET J
SEN 108
La politique de développement rural au Sénégal. (Rural development policy in Senegal.) (Paris, SEDES, 1965/Direction Générale à la Recherche Scientifique et Technique), Vol.IV, Section V, of "Le développement rural dans les pays d'Afrique Noire d'expression française" (Rural development in the French-speaking countries of black Africa) pp 77-155. See AFR 113.

Assessment of a political failure by the government since independence to impose solutions to problems often accurately diagnosed and to put into action plans that were often in theory well conceived.

BROCHIER J
SEN 109
Quelques observations sur les blocages de la croissance dans l'agriculture sénégalaise. (Some remarks on obstacles to growth in agriculture in Senegal.) ("Tiers-Monde", Paris, 1967, No.30, pp 455-468.)

A brief assessment of returns on investments in agriculture. Their generally low level is to a large extent attributable to ineffective extension services.

DIARASSOUBA B C
SEN 110
L'évolution des structures agricole au Sénégal. (Changes in agricultural structure in Senegal.) (Paris, Edition Cujas, 1967) (thesis) 350 pp (P).

Developments in the planning and organisation of agricultural production since independence are described, and shortcomings analysed.

DE MEREDIEU J & AUBRAC R
SEN 111
Integrated agricultural development in the Gambia River Basin. Report to the governments of Gambia and Senegal. (Rome, FAO, 1964) 61 pp.

For summary see GAM 103.

2. REGIONAL STUDIES

ANON
SEN 201
Rapport de la mission d'aide à l'élaboration des perspectives régionales et la mise en evidence des types de projets à prévoir pour les programmes régionaux du 2e Plan (1965-1969). (Report of a mission to assist in the establishment of regional forecasts and the examination of suitable types of planning project for the regions under the 2nd Plan.) (Dakar,

CINAM/GRONTMIJ (NV)/BAEK, 1964/Brussels, Fonds Européen pour le Développement,) 2 vols. 187 pp (P).

Includes regional production forecasts to 1980.

SERREAU J
SEN 202
Rapport de stage sur la régionalisation du Plan et l'animation au Sénégal. (Report on a visit to examine the regionalisation of the Plan and 'animation' in Senegal.) (Paris, Ministère de la Coopération, undated) 29 pp and Annexes.

Part I states the case for regionalising the Plan. Part II reports progress to date. Part III considers the opportunity offered by regionalisation for freeing 'animation' from its hitherto too close identification with a single sector, as well as from a top-heavy central administration. Devolution of responsibility must be effective and not merely nominal. Both the conception and execution of the plan ought to be closer to the decision-makers whether in the field of production, consumption or investment.

GRIVEAU M *et al*
SEN 203
La situation économique de la Moyenne Casamance et ses possibilités de développement. (The economy of Central Casamance and possibilities for its development.) (Paris, BDPA, 1975) 137 pp.

Inventory of resources and an outline of a phased development plan within the framework of the Second Four-Year Plan (1965-1969).

PELISSIER P
SEN 204
Les paysans du Sénégal. Les civilisations agraires du Cayor à la Casamance. (The peasants of Senegal. The agrarian civilisations, from Cayor to Casamance.) (St.Irieux, Imprimerie Fabrègue, 1966) 941 pp (P).

A comprehensive, illustrated account of the regions of Senegal, their inhabitants, customs and agricultural practices.

CANTRELLE P *et al*
SEN 205
La moyenne vallée du Sénégal. Etude socio-économique. (Social and economic study of the middle Senegal valley.) (Paris, PUF, 1962) 368 pp (P).

For summary see MAU 201.

GUILLAUME M & DURAND J
SEN 206
Possibilités de mise en valeur des terres salées du Siné Saloum. (Possibilities of utilising salinated lands in Siné Saloum.) (Rome, FAO, 1962) 66 pp.

An examination of the situation and recommendations for a limited reclamation of sterile land and development of rice-growing.

VAN CHI N & BONNARDEL R
SEN 207
L'économie maritime et rurale de Kayar, village sénégalais: problèmes de développement. (The maritime and rural economy of the Senegalese village of Kayar and its development problems.) (Dakar, IFAN, 1968) 257 pp (P).

ANON
SEN 208
Région de Casamance: perspectives de développement. (Development prospects in the Casamance region.) (Ziguinchor, Commission de Planification, 1964) 90 pp (variously numbered).

Situation and outlook, with forecasts of agricultural production, by region, to 1980.

3. LAND TENURE

GONDIAM O
SEN 301
Aspects du régime foncier sénégalais. (Aspects of land tenure in Senegal.) ("Civilisations", Brussels, 1965, No.1, pp 82-90.)

A historical sketch of the main principles of land law, and a summary of recent legislation.

M'BENGUE A B
SEN 302
La réforme foncière et agraire au Sénégal. (Land and agrarian reform in Senegal.) ("Penant", Paris, 1965, No.707, pp 297-304.)

A description of the land reform law of June 1964. (WAERSA 101/1966.)

NOBLE B P
SEN 303
Mémoire sur quelques aspects du régime au Sénégal, en Angleterre, et en Gambie. (Note on some aspects of land tenure in Senegal, England, and Gambia.) (In "Annales Africaines, 1965", Dakar University, Paris, Pedone, 1965, pp 229-250.)

The English concept of freehold is compared with customary forms of land tenure in Senegal and Gambia, and contrasted with French concepts of property derived from Roman Law.

4. CO-OPERATIVE FORMS OF ENTERPRISE

LAVILLE P & BELLONCLE G
SEN 401
Le mouvement coopératif au Sénégal: bilan et perspectives. (The co-operative movement in Senegal: situation and outlook.) (Paris, Collège Coopératif, 1964) 45 pp.

LAVILLE P
SEN 402
La Coopération et le développement économique et social en Afrique de l'Ouest. Etude de cas: le coopératisme sénégalais. (Co-operation and economic and social development in West Africa. Co-operation in Senegal: a case study.) ("Revue des Etudes Coopératives", Paris, 1966, No.145-146, pp 289-310.)

A critical review of co-operative activities in Senegal, bringing up to date Laville's earlier study.

N'DIAYE A *et al*
SEN 403
Du mouvement coopératif au Sénégal. (The co-operative movement in Senegal.) (Dakar, INEA, undated) 3 vols. 31 pp, 73 pp, 33 pp.

Part I describes the welfare societies founded by the colonial administration. Part II deals with the achievements and prospects of the 1,500 local co-operatives. Part III deals with co-operative education and training policy. (WAERSA 2914/1966.)

CAMBOULIVES Marguerite
SEN 404
L'organisation coopérative au Sénégal. (The organisation of co-operatives in Senegal.) (Paris, Pedone, 1967) 403 pp (P).

History of the development and description of the organisation of co-operation in Senegal during the first five years after independence. All aspects, legal, institutional, financial, educational, and political, are dealt with in considerable detail.

ANON
SEN 405
Le Synjar[illegible], Dakar (Syndicat des jardiniers et marafchers de la région du Cap-Vert). (Abidjan, INADES, 1965) 80 pp (P).

For summary see SEN 908.

REVERDY J C
SEN 406
La société rurale au Sénégal: les structures foncières, familiales et villageoises des Séres. (Rural society in Senegal: the structure of land tenure, of the family, and of the village among the Sères.) (Aix-en-Provence, CASHA, undated) (?1967)) 115 pp.

Study of social, tenurial, and family influences in the villages of Saokom, with particular reference to the establishment of a groundnut marketing co-operative and social resistances to a change-over from a village to a co-operative outlook. Lessons learnt (especially on credit aspects) form a basis for the author's guide-lines for future local development policy.

WADE A La doctrine économique du mouridisme. (Economic teachings
SEN 407 of the Mouride sect.) (In "Annales Africaines, 1964", Dakar University, Paris, Pedone, pp 175-206.)

COUNTY P & COPANS J Travaux collectifs agricoles en milieu wolof
SEN 408 mouride. (Collective agricultural work among the Wolof Mourides.) (Dakar-Ham, Centre ORSTOM, 1968) 55 pp.

Two studies dealing with the type of farming organisation peculiar to the Mouride sect of Moslems.

ECREMENT H Mouvement coopératif et développement rural dans la
SEN 409 République du Sénégal. (The co-operative movement and rural development in Senegal.) (Paris, Bureau d'Etudes coopératives et communautaires, 1966) 246 pp (P).

Brief description of local administration and national planning of rural development. Partial analysis of the co-operative movement, based on a survey of 28 Siné-Saloum co-operatives in August and September, 1963. Current planning trends; the role of the official co-operatives; and a survey of development projects. (CIDESA 129/1966.)

6. LIVESTOCK PRODUCTION

REPUBLIQUE DU SENEGAL, MINISTERE DE L'ECONOMIE RURALE, DIRECTION DE
SEN 601 L'ELEVAGE ET DES INDUSTRIES ANIMALES Deuxième Plan 1965-1969, 2 Vols. (unpaginated).

Forecasts of livestock numbers, and of output of livestock products, within the framework of the Second Plan, are given up to 1969, together with proposed investments in veterinary services, stock improvement plans, abattoirs, etc.

TROQUEREAU P J A Les ressources animales au Sénégal: leur exploitation;
SEN 602 perspectives d'avenir. (The present use of the animal resources of Senegal and outlook for the future.) (Dakar, République du Sénégal, 1960) 124 pp (P).

A study of supply, demand, marketing, and processing of cattle and meat, with recommendations for future action at all stages.

TOURTE R Le bétail de trait et son alimentation. Un tel élevage
SEN 603 est rentable dans les conditions écologiques de Bambey. (The feeding of draft cattle. A profitable form of cattle-raising under the ecological conditions of Bambey.) ("L'Agronomie Tropicale", Paris, 1962, No.2-3, pp 166-173.)

First experiments at Bambey suggest a promising future for combining animal traction with milk production, the stock being fed off the holding for four months of the year and communally grazed for the other eight months.

RECEVEUR P Définition d'un programme d'aménagements hydro-pastoraux
SEN 604 dans la zone sylvo-pastorale. (Principles of irrigation and grazing policy in forest and grassland areas.) (Paris, Ministère de la Coopération, 1965) 69 pp.

A discussion of the main issues of livestock-raising: ranging and ranching, soil conservation, water distribution, fire prevention, &c.

NOURRISSAT P
SEN 605
Problèmes posés par l'implantation des prairies temporaires au Sénégal. Premier résultats. (Problems raised by the introduction of leys in Senegal.) ("L'Agronomie Tropicale", Paris, 1965, No.5, pp 495-511.)

A review of the agricultural and economic conditions of ley farming and of technical and psychological obstacles to its introduction. (WAERSA 1794/1966.)

ANON
SEN 606
Etude des pâturages naturels du Ferlo oriental. (Study of permanent pasture land in eastern Ferlo.) (Maisons-Alfort, IEMVT, 1966) 180 pp.

A technical examination of grass varieties, soil conditions, and rainfall as a basis for pasture improvement policy, with special reference to the seasonal control of grazing in the neighbourhood of watering points to prevent destruction of pastures by excessive treading.

AUDRU J
SEN 607
Etude des pâturages naturels et des problèmes pastoraux dans le delta du Sénégal. Definition d'une politique de l'élevage. (Study of permanent pasture land and grazing problems in the Senegal river delta.) (Maison-Alfort, IEMVT, 1966) 3 vols. 359 pp.

Vol.1 describes the region and its flora. Vol.2 describes the different stock-raising systems employed in the region; its grazing resources; and the effects of the expansion of rice cultivation on grazing practices. A livestock-raising policy to be complementary with rice-growing is outlined. Vol.3 contains maps.

SOW S
SEN 608
Intégration de l'élevage et des éleveurs dans la zone pionière du Delta. (Integration of livestock-raising and livestock farmers in the Delta settlement area.) (Dakar, ENEA, 1965) Mémoires de l'ENEA, 38 pp.

7. CROP PRODUCTION

BONLIEU A *et al*
SEN 701
La conservation des récoltes au Sénégal. Essais sur le mil, le sorgho, le paddy, le niébé. (Crop storage in Senegal. Trials with millet, sorghum, paddy, and cow peas.) ("L'Agronomie Tropicale", Paris, 1964, No.1, pp 7-44.)

Costs of different methods of storage are compared.

ANON
SEN 702
L'action de la Compagnie Générale des Oléagineux Tropicaux (CGOT) en Casamance, 1948-1964. (The activities of the General Tropical Oilseeds Company in Casamance.) (Paris, SEDES, 1965/Direction Générale à la Recherche Scientifique et Technique.) Vol.III, Section I of "Le développement rural dans les pay d'Afrique Noire d'expression française" (Rural development in the French-speaking countries of black Africa) pp 1-49. See AFR 113.

A critical examination of the Company's methods and aims and of results achieved in large-scale mechanised production of groundnuts (associated at a later stage with semi-mechanised rice and millet production). The reasons for the Company's failure, including a failure to secure the involvement of the local population, are analysed.

SCHILLING R
SEN 703
L'arachide en cultures associées avec les céréales. (Groundnuts grown in association with cereals.) ("Oléagineux", Parks, 1965, No.11, pp 673-676.)

Comparison of yields shows that the adoption of the farming system discussed could contribute considerably to food production. (WAERSA 2879/1966.)

BOUTHIER M
SEN 704

La diversification des cultures et ses problèmes au Sénégal. (Problems of crop diversification in Senegal.) ("Tiers-Monde", Paris, 1965, No.24, pp 1031-41.)

The vulnerability of groundnut production has made diversification necessary, but a basic requirement is the establishment of a distributive network for other crops. (WAERSA 2878/1966.)

ANON
SEN 705

Programme de développement accéléré de la productivité d'arachide et de mil, dans les régions de Thiès, de Kaolack, et de Dioubel. (Programme for achieving higher productivity in the cultivation of groundnuts and millet in the Thiès, Kaolack, and Diourbel regions.) (Dakar, SATEC Mission du Sénégal, 1967/Ministère de l'Economie Rurale République du Sénégal) 4 vols. 156 pp.

Progress reports for 1966 on the activities of extension services in areas where groundnut and millet production is being intensified. Analysis of labour productivity and degree of mechanisation.

BIGI F et al
SEN 706

Rapport des experts, 2e Comité Technique Européen, réuni le 29 avril 1966 à Dakar. Opération de productivité arachidière au Sénégal. (2nd Experts' Committee report, 29th April 1966, at Dakar. Groundnut productivity scheme in Senegal.) 12 pp.

Recommendations on the future of the groundnut operation, on diversification, and on the gradual takeover of the extension services by nationals.

LACOMBE-ORLHAC
SEN 707

Contribution à l'étude de l'emploi du temps du paysan dans la zone arachidière (Hanène, Sénégal). (A contribution to the study of peasant farmers' use of time at Hanène, in the groundnut area.) (Dakar, ISEA, 1967) 127 pp.

Work study of the activity of three peasant families based on observations by IRHO. Since IRHO's interest is primarily technical and not economic, time spent in social and miscellaneous activities is not broken down into detail (e.g., 'travel' indicates absence from the village, but its social purpose is unknown). At present the African works about 1,400 out of a possible 2,900 hours a year. How far could the unemployed hours be used to raise agricultural output? How far, especially in the dry season, are they spent on works of local infrastructure (e.g., irrigation and afforestation schemes), or away from the village in mining and industry and miscellaneous seasonal activities? The author analyses the data which are available, by sex, by season, and by type of production, including the extent of under-employment. He discusses the methodological shortcomings of the data and the desirable shape of future enquiries into use of time. These would be facilitated by the close and trusting relationship with the local population enjoyed by IRHO's extension worker, who has spent 16 years at Hanène.

ANON
SEN 708

Le secteur textile au Sénégal. (The textile sector in Senegal.) ("Bulletin d'Afrique Noire", Paris, 1966, No.412, pp 8329-8341.)

An examination of the textile market and prospects for the development of the whole sector. (WAERSA 2870/1966.)

ANON
SEN 709

Projet de développement de la culture cotonnière au Sénégal. Période 1967/1972. (Plan for developing cotton production in Senegal. Period 1967/1972.) (Paris, CFDT, 1967/ République du Sénégal, Ministère de l'Economie Rurale/EEC Commission.)

The first of these two documents gives the original outline plan, starting with 100 ha. in 1964/65, with a target of 2,000 ha. by

1967/68. The second describes the satisfactory progress made up to 1966/67: of the 1,000 aimed at for that year, 962 were planted, yielding 1,105 tons. 21 per cent of fields yielded over 1,500 kg./ha., only 23 per cent under 750 kg./ha. It was aimed to increase the area under cotton without average yields becoming unduly lowered, so that by 1972/73 there would be 7,600 ha., producing 7,600 tons. The timetable is intentionally conservative, and development might be more rapid.

BERG B R
SEN 710
Nigeria, Senegal and the Congo (Kinshasa). The projected level of demand, supply and exports of oilseed products to 1975, with implications for US exports to the EEC. (Edmonton, Manning-Berg Research Associates, 1967) 78 pp.

For summary see COK 701.

ARRIGHI de CASANOVA J et al
SEN 711
Rapport d'une mission d'étude du développement de l'Industrie sucrière sénégalaise. (Report on a mission of enquiry into the development of the Senegalese sugar industry.) (Paris, Ministère de la Coopération, 1965) 50 pp.

An analysis of present demands for sugar and future possibilities (mainly subject to availability of water for irrigation) of supply of cane from domestic sources. Costs and returns on the necessary investments in production and processing are estimated over a twelve-year period.

MARIE SAINTE Y
SEN 712
La culture attelée au Sénégal. (Animal traction in Senegal.) (Dakar, Secrétariat d'Etat au Plan et au Développement, 1962) 77 pp.

A discussion of problems and possibilities.

NOURRISSAT P
SEN 713
La traction bovine au Sénégal. (Cattle as draft animals in Senegal.) ("L'Agronomie Tropicale", Paris, 1965, No.9, pp 832-853.)

A mainly technical article. (WAERSA 2788/1966.)

MONNIER J
SEN 714
Contribution à l'étude de la traction bovine au Sénégal. (A contribution to the study of the use of animal traction in Senegal.) ("Machinisme agricole tropical", Antony, 1965, No.10, pp 3-25, No.11, pp 15-27.)

The first of these two articles is mainly technical. In the second, costs per unit of groundnuts, millet, and green forage grown with the use of animal traction are calculated. In Senegal draft animals, where employed, tend at present to be under-utilised.

GARIN M
SEN 715
Bilan économique de la culture attelée dans quatre villages du Laghem oriental (Région de Kaolack). (Economic effects of the use of animal traction in four villages of eastern Langhem (Kaolack region).) ("Oléagineux", Paris, 1966, No.6, pp 365-370.)

A study of the influence of animal traction on crop area, labour productivity, and farm and personal incomes over a period of seven years. The different costs of using drills, carts, hoes and composite implements are estimated.

GÜSTEN R
SEN 716
Die Rentabilität der Verwendung von Mineraldünger bei Erdnüssen in Senegal, Nordnigeria und Niger. (The economics of fertiliser application to groundnuts in Senegal, Northern Nigeria and Niger.) ("Zeitzchrift für ausländische Landwirtschaft", May, 1965.)

For summary see NIG 705.

9. MARKETING/CONSUMPTION

DE FONT-REAULX H
SEN 901

Rapport sur les conditions d'exportation du riz malien vers la Côte d'Ivoire, Le Ghana, et le Sénégal. (Report on conditions for exporting rice from Mali to Ivory Coast, Ghana, and Senegal.) (Ségou, BDPA/FAO, 1966) 33 pp.

Contains a brief assessment of supply and demand in Senegal, with estimates of transport and other costs of importing rice from Mali.

ANON
SEN 902

Le marché des produits laitiers au Sénégal. (The market for dairy products in Senegal.) (Paris, CNCE, 1967) 186 pp (P).

Local milk production, the local dairy industry, and the market for imported products are analysed. Part II describes internal marketing and distribution arrangements. Prices of local and imported products are examined. Part III considers the place of France, the Netherlands, West Germany, and Denmark in the Senegalese market for dairy products.

TROQUEREAU P J A
SEN 903

Les ressources animales du Sénégal: leur exploitation; perspectives d'avenir. (Present utilisation of livestock resources in Senegal, and outlook for the future.) (Dakar, République du Sénégal, 1960).

For summary see SEN 602.

LEDUC A C & TYC J
SEN 904

Le marché de la viande dans l'agglomération dakaroise. (The market for meat in the Dakar conurbation.) (Paris, SEDES/SCET (COOP), 1962) 255 pp.

Part I descriptive analysis. Part II recommendations for increasing future supplies and improving their processing and distribution. Forecasts of consumption to 1972.

SY C
SEN 905

Les routes du bétail au Sénégal oriental. (Cattle trails in eastern Senegal.) (Dakar, Ministère du Plan et du Développement, 1967) 18 pp and annexes.

A description which provides a working document for the study of problems of livestock and of their inclusion in a market economy.

MEDGE P et al
SEN 906

Trente ans de commercialisation arachidière. Statistiques des volumes d'arachide coque commercialisés par point de traite de 1935/36 à 1966/67. (Thirty years of groundnut marketing. Statistics of amounts of groundnuts in shell marketed, by trading posts, 1935/36 - 1966/67.) (Dakar, Ministère du Plan et de l'Industrie, Direction de l'Aménagement du Térritoire, 1968) 88 pp.

CARLE P
SEN 907

Les problèmes d'organisation du marché de l'arachide dans let états de l'Afrique de l'Ouest. (Problems of organising the market for groundnuts in West African states.) ("Coopération et Développement", Paris, 1964, No.2, pp 17-26.)

A description of the difficulties encountered and of the different solutions attempted in Senegal, Niger and Nigeria.

ANON
SEN 908

Le SYNJARMAR. (Syndicat des jardiniers et maraîchers de la région du Cap-Vert). (Abidjan, INADES/Paris, ESP, 1964) 80 pp (P).

The place of market-gardening in the Senegalese economy is examined, and the history and organisation of SYNJARMAR, the market-gardeners' trade association in the Cape Verde region, described.

WADE M T
SEN 909
Problèmes d'aménagement des Niayes. (Planning problems in the Niayes region.) (Dakar, Ecole Nationale d'Economie Appliquée, Collège d'Aménagement du Térritoire, undated) (thesis) 101 pp.

A description of the activities of SODENIA, a company set up with state and private capital in 1962 principally to develop production and marketing of fruit and vegetables. Future prospects and obstacles (those of infrastructure, and of social and farm structure, as well as marketing and financial) are examined.

ANON
SEN 910
La commercialisation des produits maraîchers au Sénégal. Etude préliminaire d'un marché de gros à Dakar. (Marketing of market-garden crops in Senegal. Preliminary study for a wholesale market at Dakar.) (Dakar, SCET (COOP) 1964/ SODENIA) 133 pp.

Supply and demand, and arrangements for distribution and marketing, are analysed, and recommendations made for their improvement. Technical and financial requirements for setting up a wholesale market are outlined.

NASTA V
SEN 911
Rapport au gouvernement du Sénégal sur la commercialisation des produits maraîchers. (Report to the government of Senegal on the marketing of horticultural products). (Rome, FAO, 1965) EPTA Report 1967, 46 pp.

Present situation and future outlook are considered and recommendations made on the retail markets in Dakar, on co-operatives and on exports.

BYE P & LE MOAL Y
SEN 912
Commercialisation et diffusion des produits alimentaires importés. Rapport de stage effectué en juillet-septembre 1965. (Marketing and distribution of imported food products. Enquiry made while on temporary attachment July-September 1965.) (Dakar, ISEA, 1966) 189 pp (P).

A descriptive analysis of the internal marketing system of Senegal, competition and price structure, seasonal variations, urban and rural differences, and current influences for change. Imported products mainly considered are millet, rice, tea, canned vegetables and 'pasta', powdered and concentrated milk, tomato concentrate, wheat and other cereals (either as flour or for milling), and sugar.

ADAM C
SEN 913
L'équilibre vivrier au Sénégal. (Food balances in Senegal.) (Montpellier, Faculté de Droit et des Sciences Economiques, 1964) 2 vols. 356 pp.

A study of supply and demand in the early 'sixties, of government policies designed to redress imbalances, and of the possible situation by 1970.

ANON
SEN 914
Les aspects du problème vivrier sénégalais. (Aspects of the food problem in Senegal.) (Dakar, ISEA, 1965) 105 pp.

Stock-taking after four years of the Plan and outstanding problems, technical, nutritional, and economic.

ANON
SEN 915
Besoins nutritionnels et politique économique. Réflexions à partir d'une enquête realisée dans trois village sénégalais. (Nutritional needs and economic policy. Consideration of an enquiry carried out in three Senegalese villages.) (Dakar, ISEA, 1965) 160 pp (P).

The principal objective of the enquiry, carried out in 1962/63, was to determine the economic factors influencing food consumption in order to facilitate the inclusion of nutritional problems in the planning of economic development. (WAERSA 1093/1966.)

MERSADIER Y
SEM 916

Budgets familiaux africains. Etude chez 136 familles de salariés dans trois centres urbains du Sénégal. (African family budgets. An enquiry among 136 wage-earners' families in three urban centres in Senegal.) (Dakar, IFAN, 1957) 103 pp (P).

DESCHAMPS L
SEN 917

Carré et exploitation dans le centre de la région arachidière. (A 'carré' and its farming activity in the middle of the groundnut region.) (Sénégal, SATEC, 1965) 2 Vols. 47 pp.

Economic study of a 'carré' ('square' or sector of a village), comprising 10 persons, covering use of land, capital and labour, output, consumption by family and cash sales, and personal expenditure. The paper concludes with notes on aspects of extension work arising directly from the conduct of the holding.

ANON
SEN 918

Aperçu sur les recettes et dépenses d'un carré du Cayor. (Examination of income and expenditure of a 'carré' in Cayor. (Dakar, SATEC, 1967) 27 pp.

Economic study of a 'carré' comprising 15 persons. 93 per cent of gross farm income is derived from groundnuts, 35 per cent of personal expenditure is on food. Savings are very low, or often, owing to the costs of family feasts, negative.

10. PROCESSING INDUSTRIES

MAS J B
SEN 1001

Les industries du Sénégal. (Industry in Senegal.) (Paris, Ministère de la Coopération, 1965) 69 pp.

Analysis of output, by industry, 1956-1962.

ANON
SEN 1102

Petites et moyennes industries. Marchés et perspectives d'implantation. (Outlook for setting up small and medium-sized industries and for their markets.) (Paris, SEDES, ?1963.)

Includes studies of the margarine, glucose, and animal compound-feed industries.

ANON
SEN 1103

Les industries du Cap Vert. Analyse d'un ensemble d'industries légères de l'Afrique occidentale. (The industries of Cape Verde.) (Dakar, ISEA, 1964) 93 pp.

History and descriptive analysis of the light industry mainly located on the Cape Verde peninsular between Dakar and Rufisque, including those processing agricultural produce. Relations between the industrial and primary sectors are discussed and a Leontief matrix (for 1959) presented.

O'HAGEN J P & STOPFORTH J
SEN 1004

Structure of the oilseed industry and factors affecting its location. ("Monthly Bulletin of Agricultural Economics and Statistics", Rome, FAO, 1967, No.5, pp 1-15.)

Includes economic appraisal of the oilseed-crushing industry in Senegal.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

DESCLOITRES R
SEN 1101

L'administration locale du développement rural au Sénégal. (Local administration of rural development in Senegal.) (Aix-en-Provence, CASHA, 1964) 209 pp.

An analysis of present organisation and suggestions for improvement. (WAERSA 1333/1965.)

BROCHIER J
SEN 1102

La diffusion du progrès technique en milieu rural sénégalais. (The spread of technical innovation in rural areas in Senegal.) (Dakar, ISEA, 1965) 2 vols. 510 pp (also Paris, IEDES/PUF, 1968, 396 pp (P).)

A study of the obstacles to the spread of technical innovations and of the extent to which techniques at present being spread are effective.

N'DAO A
SEN 1103

L'évolution de la vulgarisation agricole au Sénégal. (The development of agricultural extension work in Senegal.) ("Revue de la Société d'Etudes et d'Expansion", Liege, 1963, No.208, pp 714-718.)

A descriptive review. (WAERSA 2826/1964.)

LOMBARD J
SEN 1104

Connaissance du Sénégal - géographie humaine. (Survey of Senegal: human geography.) ("Etudes Sénégalaises", Dakar, 1963, pp 1-183.)

Part 2 includes a discussion of the development of different systems of agriculture under the influence of research and advisory services and the introduction of large-scale enterprises. Part 3 deals with urban communities, including the development of vegetable-growing. (WAERSA 3277/1965.)

HAPGOOD D
SEN 1105

Rural animation in Senegal. ("International Development Review", Washington, DC, 1964, No.3, pp 15-18.)

Successes and failures are analysed of this technique, which is based on the view that peasants in traditional societies will not change their production methods until they change their wider attitude towards life and society. (WAERSA 2023/1965.)

BILLAZ R
SEN 1106

L'animation, voie et outil du développement du Sénégal, son articulation avec les structures de vulgarisation et de coopération. ('Animation' as a way and means of development in Senegal, and its co-ordination with the extension services and co-operatives.) (Paris, IRAM, 1967) 22 pp.

The principles of 'animation rurale' are described, as well as its role in the development of Senegal since first experiments in 1959, especially through the SATEC and the co-operative movement.

DE DECKER H
SEN 1107

Développement communautaire en Afrique Occidentale. Etude comparée des modèles guinéens et sénégalais. (The nation state and community development in West Africa. A comparative study of the Guinean and Senegalese models.) (Paris, Mouton, 1966, Université Lovanium de Kinshasa, Institut des Sciences Politiques et Sociales, 1966) 470 pp (P).

For summary see GUI 1101

12. RURAL/URBAN RELATIONS

METGE P
SEN 1201

Plan national d'aménagement du territoire. Phase préliminaire. (A national town and country plan. Preliminary stage.) (Dakar, Ministère du Plan et du Développement, Direction de l'Aménagement du Territoire, undated) 141 pp.

The paper, designed as a basis for discussion only, considers likely developments by 1995 in the pattern of urban and rural life in the light of demographic, social, and economic change. For each of the four main zones, North, Centre, the Senegal Valley, and South of Gambia, estimates are given of land under cultivation, of cultivated land per head of the agricultural population, and of total rural population, in 1995.

MINISTERE DU PLAN ET DU DEVELOPPEMENT, COMMISSION DE L'AMENAGEMENT DU TERRITOIRE
SEN 1202
Propositions générales pour un schéma 1995 d'aménagement du territoire. (General proposals for an outline town and country plan for 1995.) (Dakar, 1968) 146 pp.

A slightly amended re-issue of SEN 1201.

RAVAULT F
SEN 1203
Kanel. L'exode rural dans un village de la vallée du Sénégal. (The flight from the land in Kanel, a village of the Senegal valley.) ("Les Cahiers d'Outre Mer", Bordeaux, 1964, No.65, pp 58-80.)

The low cash incomes to be derived from traditional agriculture are one of the incentives towards migration to the towns. In the case examined local ecological conditions contribute to uneven earnings.

METGE P
SEN 1204
Politiques migratoires: les migrations et la transformation de la société rurale traditionnelle au Sénégal. (Migration policies, migration, and changes in traditional rural society in Senegal.) (In "Structures traditionnelles et développement", Paris, Eyrolles, 1968, pp 39-58.)

Recent migratory movements within Senegal and the effects of the official policies for migration and resettlement of the colonial and independent governments are analysed. Migration, in the author's view, assists the breakdown of the structure of society, and the greatest danger lies in the exodus from the countryside.

ANON
SEN 1205
La femme africaine et les marchés dakarois. Un aspect du rôle socio-économique du la femme en milieu urbain. (African women in the Dakar markets. An aspect of the social and economic role of African women in towns.) (Dakar, ISEA, 1963) 132 pp.

Findings of a survey of women who market food products: their ethnic origins, their sales (prices and quantities), and their place in the organisation of the markets.

METGE P
SEN 1206
Les villes et l'avènement d'une société moderne au Sénégal et en Afrique de l'Ouest. (Cities and the advent of modern society in Senegal and West Africa.) (In "Structures traditionnelles et développement", Paris, Eyrolles, 1968, pp 277-316.)

Changes in the size and distribution of the urban population up to 1964 are analysed, and social and employment problems examined.

CAMARA C
SEN 1207
Saint-Louis-du-Sénégal: évolution d'une ville en milieu africain. (Growth of an African city.) (Dakar, IFAN, 1968) 292 pp (P).

MERSADIER Y
SEN 1208
Dakar entre hier et aujourd'hui. (Dakar between yesterday and today.) ("Revue française d'études politiques africaines", Paris, 1968, No.29, pp 39-50.)

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

SIERRA LEONE GOVERNMENT. Ten-Year Plan of economic and social development for Sierra Leone, 1962/63-1971/72. (Freetown, Government Printer, 1962) 102 pp (P).
SIE 101

The section on agriculture, forestry, and fishery (pp 24-28) examines staple crop production, credit, import substitution, irrigation, and livestock (cattle, pigs and poultry) production. Expansion is considered in general terms and no quantitative targets are put forward. Industry (pp 53-59) is mainly dependent on the primary sector.

SAYLOR R G The economic system of Sierra Leone. (Durham, North Carolina, Duke University, Commonwealth Studies Center, 1967) 231 pp (P).
SIE 102

In the section on agriculture (pp 34-144) production, land tenure, and the role of government are described and producers' responsiveness to price examined. There is a section dealing with the marketing activities of expatriate and African firms and individuals, and of the Sierra Leone Produce Marketing Board.

ANON Sierra Leone: an economic survey. (London, Barclay's Bank DCO, 1968) 33 pp (P).
SIE 103

The section dealing with agriculture (on which about 70 per cent of the labour fource depends for its livelihood) is mainly based on the 1965/66 Agricultural Statistical Survey. (WAERSA 4159/1968.)

BIRMINGHAM W & FORD A G (Editors) Planning and growth in rich and poor countries. (London, Allen & Unwin, 1966) 267 pp (P).
SIE 104

Studies of the theory of economic growth integrated with an examination of the economies of the UK, India, Ghana, and Sierra Leone. (WAERSA 2/1967.)

3. LAND TENURE

PILGRIM J Social aspects of agricultural development in Sierra Leone. I Land tenure. ("Sierra Leone Studies", Freetown, 1967, No.20, pp 191-200.)
SIE 301

Information is presented on the Mende system of organisation and land tenure in Sierra Leone. Land rights are held by corporate family groups and are vested in the heads of these. The present legal and political system tends to introduce rigidity into the system of land tenure, and suggestions are being made for changes that confer on it a greater economic viability. (WAERSA 830/1968.) See also SIE 1101.

HUSSAIN M H Customary land tenure in the context of a developing agricultural economy. (Rome, FAO, 1964) EPTA Report 1853, 23 pp (not released).
SIE 302

4. CO-OPERATIVE FORMS OF ENTERPRISE

JOHNSTON R E The progress of co-operation in Sierra Leone. (In "Year Book of Agricultural Co-operation, 1965", London, Plunkett Foundation for Co-operative Studies, pp 185-200.)
SIE 401

An assessment of fifteen years of sustained growth of co-operation, 1948-1963, and a consideration of future problems. 638 societies in mid-1963 included 252 marketing co-operatives (mainly for cocoa and rice), 361 thrift and credit societies (almost all rural unlimited liability), 5 producer co-operatives (including 3 engaged in the mechanical cultivation of rice), and 3 consumer societies.

7. CROP PRODUCTION

FTHENAKIS E et al The improvement of existing crops and development of
SIE 701 Industrial plantations: a general study. (Paris, CODEA, 1967/Government of Sierra Leone, Produce Marketing Board) 3 vols. and Annexes.

Part I (83 pp and Tables) The environment. Part II (147 pp) Present conditions and problems. Part III (88 pp) Recommended policies and programmes for action. Annexes on crop improvement scheme in the Kenema-Kailahum first rural modernisation zone (61 pp), and on the coconut: a feasibility study of plantation development (59 pp and Tables). The study includes recommendations on administration and extension services, credit, marketing and co-operatives, agricultural education and research, and crop diversification.

ANON Report on prospects of cane production in Sierra Leone.
SIE 702 (London, Bookers Agricultural and Technical Services Limited, 1964/Sierra Leone Ministry of Development) 42 pp.
SIE 702A Torma-Bum sugar investigation: first progress report, July 1965, 8 pp.
SIE 702B Torma-Bum sugar investigation: interim report, May 1966, 11 pp.

The main report describes conditions affecting the establishment of an industry: geography, communications, labour supply, climate, and soil. In order to attract the investment capital necessary for an industry whose output would satisfy domestic demand, protection against imports would have to be guaranteed. Advantages to the economy in general would include import-saving, output of by-products (both also contributing to the amortisation of the capital cost), and employment for 2,000 persons. Choice of areas is restricted by agricultural conditions and water supply. In view of the likely low sucrose content, a minimum of 8,000 acres would be needed to produce 25,000 tons of sugar a year. Out of four areas inspected that of Torma-Bum, on the Serva river, was selected and examined in detail. Further agricultural and engineering investigation, including the establishment of trial polders and setting up of river gauges, is recommended. Some results of this research are given in the two subsequent reports.

ANON Torma-Bum sugar project: feasibility study. (London,
SIE 703 Bookers Agricultural and Technical Services Limited/Sir Alexander Gibb & Partners, 1967/ Sierra Leone Ministry of Development) 78 pp (P).

Technical report, and notes on the economic and general situation, as a further follow-up to SIE 702.

9. MARKETING/CONSUMPTION

GOCHT H Marketing of eggs, poultry and other livestock products
SIE 901 in Sierra Leone. (Rome, FAO, 1963) EPTA Report 1644, 33 pp (not released).

DORJAHN V R African traders in central Sierra Leone. (From "Markets
SIE 902 in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 27-102.)

The African trader and his relationship with the world economy through Syrian (Lebanese)-owned commercial houses and European firms. A description of markets, prices, selling techniques, &c.

DUE J M
SIE 903
Changes in incomes and imports of consumer goods in Sierra Leone. (Bulletin of the Illinois Agricultural Experimental Station, Urbana, Ill., No.719, 1966) 63 pp.

Includes a recommendation for feasibility studies on whether significant import substitution could be achieved by increased local production and improved marketing of a variety of agricultural products, as well as improved production of export crops. (WAERSA 1339/1967.)

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

PILGRIM J
SIE 1101
Social aspects of agricultural development in Sierra Leone. II Technological development. ("Sierra Leone Studies", Freetown, 1968, No.22, pp 20-30.)

Difficulties of introducing agricultural innovations in Sierra Leone are discussed. Farmers look at innovations not so much in the light of farm profitability as in that of security and status for their dependents. Religious beliefs may hamper progress; demonstration plots are often useless because one must not look at another man's crops; new land is disdained because it is not protected by ancestors. Technical development must be part of a planned process of social and economic changes of attitude. (WAERSA 4063/1968.) See also SIE 301.

12. RURAL/URBAN RELATIONS

HARVEY M
SIE 1201
The study of the social, economic, and political role of urban agglomerations in Sierra Leone. (Working paper No.28 for the 34th study session of INCIDI, Aix-en-Provence, September 1967) 23 pp (P).

The economic disparity of town and country has not on the whole given rise to social antagonism between town-dwellers and peasants. Ethnic ties within the towns are becoming looser, giving way to those of trades unions and other political groupings. Low wages and a high rate of unemployment among the unskilled are characteristic. Three aspects of the long-term solution to the social and economic imbalance within Sierra Leone are briefly examined: improvement of the secondary and tertiary sectors; modernisation of agriculture; and an educational system directly related to the country's problems.

SOMALIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

SOMALI REPUBLIC
SOM 101
Short Term Development Programme, 1968-1970. (Mogadishu, Planning Commission, 1968) 170 pp (P).

The programme is designed to consolidate the achievements of the First Five-Year Plan (1963-1967), which are said in the preface to have been only modest. Agriculture and related activities are dealt with in Chapter 6 (pp 57-85). Recent developments in the production of the traditional sector (chiefly maize, sorghum, and cotton) are described. The Programme's main objectives include attainment of self-sufficiency in food crops; introduction of rice and of new cash crops such as cotton, oilseeds, and citrus; rationalising the cost-structure of banana cultivation to achieve international competitiveness; and improvement of rural infrastructure, marketing, and extension services. Problems and plans for the three state farms growing food grains (6,250 ha.), cotton (5,000 ha.), and oilseeds (5,000 ha.) are discussed. In all three cases areas cleared and/or sown to crops over the past five years have been well short of the First Plan targets, given in brackets above. By 1967 some 6,000 ha. had been cleared, but the area under cultivation was down to 500 ha. It is expected that 1,350 ha. will be cultivated during the Short-Term Plan.

Animal husbandry is dealt with in Chapter 7 (pp 86-102), which includes plans for developing veterinary services; the establishment of holding grounds for the cattle purchased for slaughter or export by the government Livestock Development Agency; setting up of stock markets complementary to the holding grounds; and construction of drying sheds for hides and skins. A pilot project, to be financed by the EEC, involves the installation of water-points, construction of roads and tracks, and equipment of a holding ground and quarantine station, to serve an area of 60,000 sq.km. lying north of Modagishu and Kismayu.

GASBARRI L
SOM 102

Linee fondamentali di sviluppo economico nel settore agricolo in Somalia. (The basis for economic development in the agricultural sector in Somalia.) ("Rivista di Agricoltura Subtropicale e Tropicale", Florence, 1960, Nos. 4-6 and 7-9, pp 181-197.)

Economic development in the 'fifties under the Italian mandate is described and future objectives sketched.

BASAK K C
SOM 103

Agricultural development planning. (Rome, FAO, 1965) EPTA Report 2007, 23 pp (not released).

An assessment of plans for mechanised farming and state farming, and of the effects on food supply.

SHIRNAME T G
SOM 104

The food and agricultural economy of Somalia. (Rome, FAO, 1965) EPTA Report 2088, 48 pp.

Possibilities for the development of production and export of livestock and bananas are examined.

SCHNITTGER L
SOM 105

Entwicklung und Entwicklungspolitik in Ostafrika - Somalia. (Development and development policy in East Africa - Somalia.) (Munich, Ifo-Institut für Wirtschaftsforschung, 1965/Ministerium für Wirtschaftliche Zusammenarbeit) 96 pp.

For summary see ETH 107

6. LIVESTOCK PRODUCTION

EVANS S
SOM 601

Animal production and health in Somalia. (Rome, FAO, 1963) EPTA Report 1655, 35 pp.

Development of the livestock industry and animal services are considered, and recommendations made on control measures.

COZZI P
SOM 602

L'allevamento del bestiame in Somalia. (Livestock-raising in Somalia.) ("Rivista di Agricoltura Subtropicale e Tropicale", Florence, 1965, No.4-6, pp 123-139.)

Description of rearing methods, grazing resources, pasture management, and processing of milk and meat. Stock numbers (cattle - mainly zebu - camels, and sheep) just prior to independence are given.

7. CROP PRODUCTION

BIGI F
SOM 701

Problemi della bananicoltura somala in vista della liberazione der mercato bananino italiano. (Problems for Somali banana production in view of the freeing of the Italian banana market.) ("Rivista di Agricoltura Subtropicale e Tropicale", Florence, July-Sept. 1966, pp 268-330, Oct.-Dec. 1966, pp 363-413.)

A detailed analysis of the structure of the banana industry in Somalia and its adjustment to a free market for bananas inside Italy. (WAERSA 3149/1967.)

BIGI F
SOM 702

Nota sulla coltura del pompelmo in Somalia. Origine, sviluppo, e prospettive. (Note on grapefruit-growing in Somalia: origins, development, and outlook.) ("Rivista di Agricultura Subtropicale e Tropicale", Florence, Jan.-March 1966, pp 53-78.)

The structure of production (228 ha. in 18 plantations) and the organisation of production and the export market are described. Costs, including distribution and export margins, are examined. It would be technically possible to increase present output of 1,100 tons a year (of which 250 are exported) to 70,000 tons, of which 50,000 tons could be exported fresh and the rest processed, from an area of 2,800 ha. This could be achieved at the end of a 16-year period, the first substantial crop (2,800 tons) coming in the 10th year after seeding. Sufficient throughput for a processing plant would be available after 14 years. Final gross output is valued at 50 mn. shillings, yielding a profit of 3.8 mn. sh. Investment costs are not estimated.

9. MARKETING/CONSUMPTION

LEWIS I M
SOM 901

Lineage continuity and modern commerce in Northern Somaliland. (In "Markets in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 365-385 (P).)

Family and clan structure and its important effects on external trade, local markets, and the urban economy.

BAUER U
SOM 902

Report to the Somali government on the marketing of bananas. (Rome, FAO, 1967) EPTA Report TA 2362, 25 pp.

Economic aspects of production, marketing and export patterns are examined and costs analysed. Somalia's position in the international market is considered with special reference to Italy and in relation to other suppliers. Recommendations are made for co-operative production and for a new policy on banana exports. (FAO 00890/1967.)

MALAKAR M C
SOM 903

Food consumption surveys in Somalia. (Rome, FAO, 1965) EPTA Report 2042, 26 pp.

The question of food shortages is examined.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIC OF SUDAN, MINISTRY OF FINANCE AND ECONOMICS Ten-year Plan
SUD 101 of economic and social development 1961/62-1970/71. (Khartoum, Economic Planning Secretariat, undated) 180 pp (P).

Chapter III (pp 82-110) deals with agriculture, including irrigation, crop production, horticulture, services, research, credit, marketing, animal resources, land use, and rural water supplies. Crop production targets are given to 1970/71. The industrial chapter includes forecast output for, and notes on, edible oils, sugar, canned fruit, milk powder, dehydrated onions, cigarettes, footwear, cotton yarns and cloth, fertilisers and insecticides.

GÜSTEN R Problems of economic growth and planning: the example
SUD 102 of Sudan. (Berlin, Springer, 1966/Munich, Ifo-Institut für Wirtschaftsforschung) Afrika-Studien, No.9, 74 pp (P).

A critical examination, mainly from a national accounting standpoint, of the Sudan's ten-year (1960/61-1970/71) Plan. Part I describes briefly the country's economic structure and the main objectives and development programmes laid down in the Plan for agriculture, industry, and public utilities. Part II explores the assumptions underlying the main growth targets, which the author finds over-optimistic. The economy's continued high degree of dependence on the export market for cotton, prospects for which have deteriorated since the 'fifties, is seen as a critical weakness. Failure to reach the Plan's export growth target, set unrealisitically high, will involve a corresponding scaling down in the anticipated rate of increase in government revenue, private savings, and consequently of the growth target set for the modern sector. Migration from the traditional sector and raising its productivity will also be slowed down. The share of foreign to total investment will fall less rapidly than predicted, thus adding a greater burden of debt service to the balance of payments on current account, already under strain from reduced export earnings. A final section discusses regional aspects of the Plan. Owing to the extreme skewness of the regional distribution of income (and hence revenue), development effort must first be concentrated where it will yield the highest returns, rather than sprinkled thinly all over on the 'watering-can' principle. At what moment to start switching investment to the less developed regions is essentially a political decision, and in the context of the Sudan's religious and racial divisions between north and south, a very difficult one.

PODUVAL R N Agricultural planning and programming in the Sudan. (Rome,
SUD 103 FAO, 1963) EPTA Report 1683, 26 pp.

STÜCKEN R (Editor) Entwicklungsbedingungen und Entwicklungschancen der
SUD 104 Republik Sudan. (Conditions and opportunities for development in the Sudan Republic.) (Berlin, Duncker & Humblot, 1963) 265 pp (P).

A general description of the economy. Two chapters on agriculture are specially devoted to cotton. There is a brief account and critical assessment of the Ten-year Plan.

SHAW D J (Editor) Agricultural development in the Sudan. Proceedings
SUD 105 of a conference held at Khartoum, December 3rd-6th, 1965. (Khartoum, Philosophical Society of the Sudan/Sudan Agricultural Society, 1966) Vol.1 (171 pp) and Vol.2 (494 pp).

The papers here collected cover a wide spectrum of technical and economic aspects of Sudanese agriculture.

SIMPSON I G
SUD 106
The developing balance between manpower and machinery, land and water in the Sudan. ("Tropical Agriculture", London, 1968, No.2, pp 79-89.)

Expansion of the irrigated area will eventually be restricted by the availability of water from the Nile. Without mechanisation output per man on non-irrigated land will remain low, since the rainfall pattern restricts both the range of crops and yields. Scarcity of capital will slow down the rate of adoption of machinery, but mechanisation of the rainlands will tend to increase the rate of migration to irrigated areas, and could, given the limited capacity of these to absorb new labour, in the end lead to unemployment and increased income disparities. Implications for government policy are discussed and the need for a reduced birthrate and faster urbanisation emphasised. (WAERSA 2176/1968.)

GÜSTEN R
SUD 107
Entwicklung und Entwicklungspolitik in Ostafrika - Sudan. (Development and development policy in East Africa - Sudan.) (Munich, Ifo-Institut für Wirtschaftsforschung, 1965/ Ministerium für Wirtschaftliche Zusammenarbeit) 143 pp.

For summary see ETH 107.

2. REGIONAL STUDIES

WITUCKI L A
SUD 201
The transformation of agriculture in the Merowe area of Northern Sudan. ("Dissertation Abstracts", Ann Arbor, Michigan, No.2854, 1968) 428 pp.

Agricultural development in the Merowe area of Northern Sudan is analysed. Farming in this hot desert area is restricted to narrow strips of irrigable arable land adjacent to the Nile River. Cross-sectional analysis of 104 farm operations was combined with study of historical information, and economic concepts based on the experience of more developed countries, in interpreting agricultural development in the area. (WAERSA 2177/1968.)

THORNTON D S
SUD 202
Regional development - the case of the Northern Province. (Khartoum, Department of Regional Economy, University of Khartoum, 1965) 22 pp.

A physical and economic survey. (WAERSA 2511/1967.)

DAVIES H R J
SUD 203
An agricultural revolution in the African tropics. ("Tijdschrift voor economische en sociale geographie", The Hague, 1964, No.4, pp 101-108.)

A study of the agricultural development of the Gedarett Plain, Province of Kassala. (WAERSA 2084/1964.)

3. LAND TENURE

THORNTON D S
SUD 301
Reform in the structural organisation of Sudanese agriculture. (Khartoum, Department of Rural Economy, University of Khartoum, 1965) 18 pp.

The author reaches eight major conclusions on the desirable direction of changes in the tenurial system which might raise agricultural productivity. (WAERSA 2470/1967.)

MAGHOUB S M
SUD 302
Land policy and settlement in Sudan. (In "Land policy in the Near East", Proceedings of the Development Centre on Land Policy and Settlement, Tripoli, Libya, October 16th-

18th, 1965, pp 175-188.) (Rome, FAO, 1967.)

Nomadism as a way of life in Sudan is now regarded as a sociological problem, and a handicap to national development. Government policy is explained, and plans for ten pilot settlement schemes involving ancillary agricultural industries are described.

DAVIES H R J
SUD 303
Nomadism in the Sudan. Aspects of the problem and suggested lines for its solution. ("Tijdschirft voor economische et sociale geographie", The Hague, Sept.-Oct. 1966, pp 193-202.)

The author's recommendations indicate that the nomadic problems, at least between the Niles, may not be as insoluble as has sometimes appeared. (WAERSA 941/1967.)

4. CO-OPERATIVE FORMS OF ENTERPRISE

HANCE W A
SUD 401
The Gezira Scheme: a study in agricultural development. (Chapter 2 (pp 31-53) of "African Economic Development"). (New York, Praeger, 1967 (revised edition)/Council of Foreign Relations) 326 pp (P).

The physical environment of the scheme, its associated irrigation projects, crop production, and tenurial and partnership arrangements are described. Advantages and disadvantages of the partnership arrangements between tenants, Board, and government, are analysed, and the applicability of the Gezira experience, since the 'twenties, to other African situations assessed. Finally, a number of features essential to the success of this type of partnership arrangement are suggested: the possibility of markedly raising productivity; of growing a high-value crop to provide a return on investment; of control at sale or processing or both to prevent illegal marketing and ensure fair distribution of receipts; of adequate control of farming proctices; and of maintaining the quality of the product. Besides, a need should exist for specialist technical and managerial skills, and for capital investment which the farmers cannot provide themselves.

WÖRZ J G F
SUD 402
Genossenschaftliche und partnerschaftliche Produktionsförderung in der sudanesischen Landwirtschaft. (Co-operation and partnership for the promotion of production in Sudanese agriculture.) ("Zeitschrift für ausländischer Landwirtschaft", Frankfurt/Main, 1966, Special Issue No.4) 79 pp (P).

A critical examination of the Gezira scheme and its extension, of two irrigation co-operatives, and of co-operatives for grain cultivation in dry-farming areas. (WAERSA 875/1967.) (Tropical Abstracts q829/1967.)

6. LIVESTOCK PRODUCTION

OSSENT H
SUD 601
Prospects for animal husbandry in the Gezira scheme. (Rome, FAO, 1965) EPTA Report 2103, 22 pp.

7. CROP PRODUCTION

SULIMAN A A
SUD 701
Stabilisation policies for cotton in the Sudan. (In "African Primary Products and International Trade", Edinburgh University Press, 1965, pp 159-180.)
A descriptive analysis. (WAERSA 1340/1966.)

RADERSMA R
SUD 702
Possible development of the tea industry. (Rome, FAO, 1961) EPTA Report 1398, 7 pp.

8. IRRIGATION

WYNN R F
SUD 801
Note on costing water supplies for irrigation. ("Sudan Agricultural Journal", Khartoum, 1965, No.1, pp 37-46.)

A description of the difficulties in isolating true costs, especially marginal costs, for gravity irrigation schemes. (WAERSA 3744/1966.)

EL HADARI A R M
SUD 802
The economics of agricultural production in the private pump schemes. Parts I and II. (Khartoum University, Department of Rural Economy, 1968) Research Bulletins Nos.13 and 15, 65 pp and 70 pp.

Results of an investigation to determine the causes of inadequate returns to private cotton growers in Kosti district on the White Nile, using a sample of 50 pump schemes and 144 cultivators. Part I contains information on general socio-economic characteristics of licensees and tenants. Part II deals mainly with costs, yields, management, and related aspects of the scheme, including share-cropping arrangements, financing and credit, and proposed co-operative systems. (WAERSA 3676/1968.)

WYNN R F
SUD 803
The development, present economic performance, and future prospects of Nile pump irrigated agriculture in the Sudan. (Khartoum University, 1967, Research Bulletin of Department of Rural Economy, No.9) 78 pp.

The causes of the recent widespread failure of pump schemes are analysed. Adequate government support services, particularly advisory services, and greater incentives to individual farmers are seen as fundamental to improving the present poor technical and economic performance of pump irrigation. (WAERSA 3678/1968.)

THORNTON D S
SUD 804
The organisation of production in the irrigated areas of the Sudan. ("Journal of Agricultural Economics", Manchester, 1965, No.2, pp 286-295.)

A description of the three main types of irrigated farming, with recommendations for modifying, at a later stage, the rigid disciplines of the Gezira-type co-operative. (WAERSA 3473/1966.)

REPUBLIC OF SUDAN, MINISTRY OF FINANCE AND ECONOMICS
SUD 805
The Roseires Pre-Investment Survey. (London, Hunting Technical Services/ Sir M Macdonald & Partners, 1965/1966.) (See Introductory Note, para.4, p iv.)

SUD 805A
Report No.2, Rahad Project: Part I Summary; Part II (65 pp) Economics; Part III Engineering; Part IV (217 pp) Agriculture.

SUD 805B
Report No.3, Roseires Project: Part I Summary; Part II 65 pp) Economics; Part III Engineering; Part IV (224 pp) Agriculture.

SUD 805C
Report No.5, Hawata extension to the Rahad Project: Part I Summary; Part II (223 pp) Economics; Part III Engineering; Part IV (223 pp) Agriculture.

Part II of each Report, after describing the physical and human resources and factors of production in the project area, examines alternative schemes, and forms, of irrigation. Market prospects for cash crops and expected returns from them, effects on farmers' incomes, profitability (both in direct revenue and in return on investment) to the government, and social profitability, are analysed and estimates given of cost/benefit ratio and rates of return.

Part IV describes agricultural activities and land use in each project area; crops and cropping patterns, with projected yields and estimated irrigation requirements; the system of livestock production, estimates of livestock population, and possibilities of market outlets for livestock products: milk; beef; sheep, goat, and camel meat; wild game; and poultry. Report No.5 gives special consideration to sugar and rice schemes, and includes a chapter on the quality and availability of tenant manpower.

805D Report No.7, Pump projects on the Main and Blue Niles: Part IA Main Nile Summary; Part IB (214 pp discontinuously paginated) Main Nile Report; Part IIA Blue Nile Report Summary; Part IIB (156 pp d.p.) Blue Nile Report.

On each Report the project area is described: human and natural resources, the existing irrigation and agricultural systems, administration and infrastructure. The profitability of cotton schemes is discussed. Problems affecting agricultural development are analysed, and planning criteria, agricultural and economic, examined: agricultural - cropping patterns and crop potential, factors affecting improvement of yields, crop water requirements, mechanisation, and introduction of livestock husbandry; economic - the local resource pattern and constraints, and scarce resources, market prospects and prices, labour requirements, return from crops, types of tenure and size of holding, rent and water charges.

REPUBLIC OF SUDAN, MINISTRY OF FINANCE AND ECONOMICS Population and
SUD 806 manpower study of the Roseires Project Area. (London, The Economist Intelligence Unit, 1965/Hunting Technical Services Limited) 81 pp.

The main objects of the study were to establish the extent of the population and agricultural labour force resident in the area; to assess its aptitude for irrigated agriculture; to investigate the availability of suitable immigrants from adjoining pump irrigated areas and from the Rufa'a area: and to recommend the siting and grouping of new villages, taking into account agricultural requirements and the provision of social services. The evidence of labour availability derived from experience of the Gezira-Managil scheme was found to be fragmentary and often contradictory, but generally speaking, there had been a decline there in tenants' contribution to the labour pool, and the productivity of hired labour for cotton-picking has also declined. Owing to a likely labour shortage in the projected new irrigated area, further research is needed into sources of hired labour. Inducements necessary to attract workers from more distant over-populated areas, or persuade nomads to settle and make economic use of their cattle, must be considered.

THORNTON D S Contrasting policies in irrigation development: Sudan
SUD 807 and India. (Reading University, Department of Agricultural Economics, 1966) Reading Development Studies, No.1, 54 pp (P).

A comparison of government intervention and policy, and guide-lines for further economic research. (WAERSA 528/1967.)

THORNTON D S & WYNN R F An economic assessment of the Khasin-el-Girba
SUD 808 Project. (Khartoum University, Department of Rural Economics, 1965) 21 pp.

Includes a detailed analysis of the Halfawi re-settlement and of the Sugar Scheme. (WAERSA 2883/1967.)

9. MARKETING/CONSUMPTION

SIMPSON I G & EL HADARI A R M Milk production and marketing in the tropics: a case study based on Khartoum Province, Sudan. (Khartoum University, Department of Rural Economy, Research Bulletin No.7/Leeds University, Agricultural Economic Division, Rural Development Study No.1, 1967) 184 pp.
SUD 901

Present production methods and the structure of the market, and the shortcomings of both, are analysed and recommendations made for their improvement. (WAERSA 1296/1968.)

LOW E M Marketing of groundnuts in the Sudan. (Reading University, Department of Agricultural Economics, 1967) Reading Development Studies No.4, 73 pp (P).
SUD 902

Exports of groundnuts from Sudan, second only in importance to those of cotton, constitute 8 per cent of world trade in cake and kernels and 10 per cent of world trade in edible nuts (in which the Sudan is, after Nigeria and Senegal, the third most important exporter). In the Kordofan-Darfur region much of the crop by-passes official auctions and is sold illegally to traders for purposes of obtaining credit and evading tax. In the Gezira region, where co-operatives have access to bank credit, co-operative marketing already accounts for a quarter of crop sales. Research is required to improve marketing arrangements and the quality standards of exports, particularly of edible nuts, whose sales can be adversely affected by aflatoxin.

ANON Khartoum's food supplies. (Khartoum University, Department of Rural Economy, 1966) Research Bulletin No.2, 196 pp.
SUD 903

Results based on a wide series of surveys at retail, wholesale, and producer level, are presented under six commodities: sorghum, fish, fruit, meat, milk, and vegetables. They suggest that present marketing channels are unlikely either to provide farmers with sufficient incentives to increase production, or enable them to make profits sufficient to capitalise further expansion. (WAERSA 3684/1967.)

MCCLOUGHLIN P F M The Sudan's three towns: a demographic and economic profile of an African urban complex. ("Economic Development and Cultural Change", University of California, Los Angeles, 1964, No.1, pp 70-83, No.2, pp 158-173, No.3, pp 286-304.)
SUD 904

Part I Introduction and demography. Part II Output and expenditure. Table No.5 gives expenditure values (total and per capita) by type of expenditure for the three towns (Khartoum, Omdurman, and North Khartoum) and as percentage of aggregate expenditure in the Sudan. Table No.6 gives the value of per capita expenditure by selected socio-economic groups, for the Sudan as a whole, and for the three towns separately, on a national accounting basis (primary, secondary and tertiary sector spending, spending on transport and communications, and government spending). Part III Labour force, by occupations, occupational income, and income distribution.

10. PROCESSING INDUSTRIES

HOLLOWAY J W T Report to the government of Sudan on the development of meat and milk industries. (Rome, FAO, 1966) 9 pp.
SUD 1001

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

YASSEIN O
SUD 1101
The Melut Agricultural Scheme, a community development scheme in developing areas. ("Civilisations", Brussels, 1965, No.2, pp 175-187.)

A description of an area comprising 20,600 ha., which has been developed with pump irrigation since 1962. (WAERSA 1581/1966.)

13. STATISTICAL SERVICES

BAPTISTA J
SUD 1301
The development of current agricultural statistics. (Rome, FAO, 1965) EPTA Report 2094, 26 pp.

Recommendations on organisation of services, data collection, and staff training.

SWAZILAND 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

ANON
SWA 101
Development planning in Swaziland. Paper presented to the Conference of African Planners, Addis Ababa, December 1967. UN Economic and Social Council, Addis Ababa, 13 pp.

A description of development planning in Swaziland to date, and the present situation and future outlook in regard to project identification, collection of basic data, plan control and implementation, and training of statistical and planning staffs.

VARIOUS
SWA 102
Experiment in Swaziland. Report of the Swaziland Sample Survey, 1960. HOLLEMAN J F (editor) (Institute for Social Research, Natal University, 1964/Swaziland Administration) (Cape Town, Oxford University Press) 352 pp (P).

After an explanation of the sampling methodology, there are separate sections on different aspects of the survey's findings, including demography. Rural economy (DANIEL J B McI) covers land utilisation, crop husbandry, and livestock. Incomes of rural homestead groups (HUGHES A J B). There is an Addendum by the editor on some aspects of agronomic policy in Swaziland.

TANZANIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

UNITED REPUBLIC OF TANZANIA & ZANZIBAR
TAN 101
Tanganyika Five-Year Plan for economic and social development, 1 July 1964-30 June 1969. (Dar-es-Salaam, Government Printer, 1964) 2 vols. Vol.I (114 pp) and Vol.2 (two editions, 180 pp and 151 pp) (P).

Vol.1 contains a general analysis of the economy and formulates development policies. Chapter 2, Section I, The Rural Sector (pp 19-36), lays down policies and production targets for sisal, cotton, coffee, tea, cashew nuts, tobacco, pyrethrum, groundnuts, seed beans, peas and pulses, sugar, and wheat. Policies and targets are also put forward for livestock husbandry and disease control, with separate sections on cattle; hides and skins; sheep, goats and pigs; milk; and poultry. In Vol.2 The Programme, Chapter 1 (Ministry of Agriculture, Forests and Wildlife) details individual projects for crop and animal husbandry (including state farms, for rice and oilseeds, and ranches), and veterinary services. Chapter 2 (Ministry of Land Settlement and Water Development) lists settlement schemes for tobacco growing, mixed farming, irrigated crops, and ranching; river basin development plans; rural water supply surveys; research and training programmes. Chapter 3 deals with development of co-operatives. Chapter 4 on Industry includes a number of food processing projects: the Tanganyika Development Corporation's tea scheme: a soluble coffee factory; cashew nut shelling plants; Northern Dairies milk processing plant; and a sugar plantation and mill.

UNITED REPUBLIC OF TANZANIA Progress report on the implementation of
TAN 102 the Five-Year Development Plan. A mid-term appraisal of achievements under the Plan (1964-1969). (Dar-es-Salaam, Ministry of Economic Affairs and Development Planning, 1967) 39 pp (P).

In the section on agriculture (pp 23-32) actual production and output increases for main crops for 1960/62-1966 are compared with projected annual rates of increase and with production targets for 1970. The required rates of increase for 1966-1970, if the Plan's projections are to be met, are then stated. Targets for cotton, coffee, cashew nuts, tobacco, pyrethrum, sugar and pulses should be reached, or exceeded. Tea and sisal production were lagging in the early period, but might possibly reach their targets. Groundnuts, maize and rice, however, will continue to disappoint. Livestock numbers were up to target. 60 out of 200 cattle-dips planned had been installed.

STEVENSON W E *et al* The economic development of Tanganyika. Report
TAN 103 of a mission by the International Bank for Reconstruction and Development. (Baltimore, Johns Hopkins Press, 1961) 548 pp (P).

A comprehensive economic survey. Chapters 4 to 11 (pp 77-226) deal with agriculture, under the headings: land use and tenure, improvement of African agriculture, agricultural transformation and research, livestock development, irrigation and flood control, forestry and fisheries, estate agriculture, and institutions for agricultural development. Present situation and problems are described in each case and recommendations made for future action. Most of the nine Annexes are directly concerned with agriculture: prospects and problems of certain major crops (II); the scope for water development (III); existing operations of the Tanganyika Agricultural Corporation (IV); food crop production (V); and economic and financial evaluation (with special reference to irrigation projects and cattle ranches) (VII).

VARIOUS Agricultural development in Tanzania. Papers read to a
TAN 104 seminar held in March 1964. SMITH H E (Editor), Dar-es-Salaam, Institute of Public Administration of Tanzania, 1965) Study No.2, 119 pp (P).

A summary of situation and problems, including papers on village settlement schemes, potential for livestock production, marketing, land tenure, credit, capital, extension services, and planning and development projects.

RUTHENBERG H Agricultural development in Tanganyika. (Berlin, Springer,
TAN 105 1964/Munich, Ifo-Institut für Wirtschaftsforschung) Afrika-

Studien No.2, 212 pp (P).

The objectives of agricultural development policy in Tanganyika are first stated. There follow a brief survey of the background to agriculture (physical features, prices and markets, structure) and of agricultural trade; and a description of British policy up to independence and the 1963/62-1963/64 Development Plan (based partly but not wholly on the recommendations of the 1960 World Bank Report, and effectively not a plan but a budget). Changes in emphasis and objective of development policy, including the People's Plan, in the first years of independence are then described. The study concludes with some general observations on agricultural development aid in the light of conditions in Tanganyika, and on criteria for selecting particular projects or general spheres (such as extension services) for aid. Two Appendices deal with technical aspects of development (crop and animal husbandry, irrigation and mechanisation), and with marketing boards and market controls.

RUTMAN G L The economy of Tanganyika. (New York, Praeger, 1968) 190 pp
TAN 106 (P).

A description of the natural and human resources, of government planning, and (with statistics) of the economic system. Agriculture is dealt with on pp 76-101. A descriptive analysis and critical examination of the government's plans for substantially increasing the country's growth rate.

RUTHENBERG H Einige Merkmale der baüerlichen Landwirtschaft in
TAN 107 Tanzania. (Some characteristics of peasant agriculture in Tanzania.) ("Zeitschrift für ausländischen Landwirtschaft", Frankfurt/Main, 1969, No.1, pp 81-86.)

Smallholder farming in Tanzania is characterised by a continuous process of adaptation to rapidly changing circumstances. An alalysis of production functions derived from farm management data indicates that the present situation is far from the optimum for the given conditions. Traditional agriculture, as defined by T. Schultz, is not typical for farming systems in Tanzania. (WAERSA 1476/1968.)

VARIOUS Smallholder farming and smallholder development in Tanzania.
TAN 108 (RUTHENBERG H (Editor) (Munich, Weltforum Verlag, 1968/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.24, 360 pp (P).

Ten case studies on different aspects of land, technological, production, and marketing problems of smallholders in selected districts of Tanzania are included. They are: Land use in the Kilombero Valley BAUM E; Cotton Farming in Sukumaland VON ROTENHAN D; Permanent farming on Ukara LUDWIG H D; Permanent cropping in the Usambara Mountains ATTEMS M; Coffee-banana holdings FRIEDRICH K H & RUTHENBERG H; Traditional farming and coconut-cattle schemes in the Tanga region GROENEVELD S; Village settlement schemes NEWIGER N; Tobacco schemes in the Central region SCHEFFLER W; Smallholder sisal PÖSSINGER H. An evaluation chapter by the editor summarises the main findings to assist agricultural production development policy. Relationships between gross return, labour availability, and crop acreage in smallholdings are tabulated. The variations noted in performance among similarly placed low-income cultivators are attributed largely to non-economic factors such as skill and enterprise. (WAERSA 3636/1968.)

SCHNITTGER L Entwicklung und Entwicklungspolitik in Ostafrika -
TAN 109 Tanzania. (Development and development policy in East Africa - Tanzania.) (Munich, Ifo-Institut für Wirtschaftsforschung, 1965/Bonn, Ministerium für Wirtschaftliche Zusammenarbeit) 163 pp.
For summary see KEN 108

2. REGIONAL STUDIES

DE WILDE JC et al
TAN 201
Experiences with agricultural development in tropical Africa. Vol.II The case studies. (Baltimore, Johns Hopkins Press, 1967/IBRD) 466 pp (P).

Chapter 6 (pp 415-450) describes livestock and agricultural development in Sukumaland, south and south-east of Lake Victoria, since World War II. Its chequered record illustrates problems and lessons of introducing new methods to an idiosyncratic people. In its efforts to achieve more intensive production there is a risk of the government repeating the mistakes of its colonial predecessor, relying on uniform and sweeping solutions, on pressure rather than persuasion, and on very limited numbers of trained extension workers.

VON ROTENHAN D
TAN 202
Bodennutzung und Viehaltung im Sukumaland/Tanzania. (Land use and cattle-raising in Sukumaland.) (Berlin, Springer, 1965/Munich Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.11, 131 pp (P).

This description of Sukuma husbandry, its natural environment, and social and economic organisation, is based on a sample survey carried out in 1963 of 75 farms in three districts. While there has been some adoption of modern techniques in cash cropping (mainly cotton), in recent years livestock husbandry has hardly changed and cattle ownership still fulfils a primarily social purpose. There is a detailed analysis of labour utilisation on the farms: low labour productivity and crop yields are the two principal obstacles to economic development in Sukumaland. The study concludes with a number of recommendations for the future improvement of crop and animal husbandry and farm structure in a community at a difficult midway stage of development between pastoral nomadism and settled commercial agriculture.

GROENEVELD S
TAN 203
Probleme der landwirtschaftlichen Entwicklung im Küstengebiet Ostafrikas. (Problems of agricultural development in the East African coastal region.) (Munich, Weltforum Verlag, 1967/Ifo Institut für Wirtschaftsforschung) Afrika-Studien No.19, 124 pp (P).

Since 1957 the Government of Tanzania has been trying to promote agriculture in the coastal district of the Tanga Region by introducing projects combining the growing of coconut palms with cattle farming. Section I presents the problems and outlines the bases of production and the introduction of new system of land use. Sections II and III cover the organisation of peasant farms. Section IV describes the development of the project, its aims, organisation and problems, and section V concludes that this new type of farming, launched for the first time in E. Africa, can only be successful under specific conditions and if all environmental factors are known and taken into account. (WAERSA 1080/1968.)

LUDWIG H D
TAN 204
Ukara - ein Sonderfall tropischer Bodennutzung im Raum des Victoria-Sees. (Ukara - a special case of tropical land use in the Lake Victoria area.) (Munich, Weltforum Verlag, 1967/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.22, 251 pp.

A detailed study of land use on the island of Ukara in SE Lake Victoria shows that even within the framework of a traditional agriculture there can be a move towards greater intensification. Comparison of conditions on the island with those on the mainland aims to find the reasons why a system linking traditional hoe cultivation and extensive livestock husbandry has evolved to create a more intensive cultivation making use of the animal manure, housing the animals, and growing special fodder crops. The study covers geographical conditions on the island and mainland, detailed studies of land use and farming methods, population changes, and movements, social organisation and nutrition, and infrastructure, including transport and marketing arrangements and education. (WAERSA 1501/1968.)

ATTEMS M
TAN 205

Bauernbetriebe in tropischen Höhenlagen Ostafrikas. (Peasant farms in the tropical highlands of East Africa.) (Munich, Weltforum Verlag, 1967/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.25, 170 pp (P).

Increasing population growth and the transition from subsistence to market production has accelerated the intensification of land-use in tropical smallholder farming. Since German colonial times the Usambara mountains in the North of Tanzania, populated by the Shambala, have been a major concern of agricultural development policy. The Shambala land was at that time regarded as exceptionally progressive in East Africa, and its political and agricultural organisation served as a model. They are now considered extremely backward. Economic conditions have deteriorated markedly since the turn of the century. An agro-economic analysis of farms in the area reveals the causes of this situation and suggests possible remedies. (WAERSA 3158/1968.)

SPOONER R J & JENKIN R M
TAN 206

The development of the lower Mgeta River area of the United Republic of Tanzania. (Tolworth, Land Resources Division, Directorate of Overseas Surveys, 1966) Land Resource Study No.1, 102 pp and Maps (P).

A description of the physical and human aspects of the region is followed by a detailed study of three areas, their topography, soils, vegetation, and land use. Criteria for selecting these areas were that they were uncultivated, readily accessible, possessed topography, soil and drainage suitable for agricultural development, and had access to adequate water supplies. Three blocks of land, totalling about 4,500 acres (1,821 ha.), one in each of the areas surveyed, were included in the development project, detailed proposals for which take up the second half of the study. Recommendations are made on choice of crops, cropping pattern and management (12 acres - 4.8 ha. - per settler), labour needs, and central machinery services (to be available for initial ploughing and as an additional aid at periods of peak labour load). Costs and returns are estimated, and tentative designs for layout put forward (alternatives of division into crop blocks or into self-contained holdings). Since tse-tse fly control is neither difficult nor uneconomic, the possibilities for livestock production are briefly examined. Centralised purchase of insecticides and of processing and grading groundnuts and cowpeas are recommended. A phased programme is suggested for land clearance between 1965 and 1968 and for cropping between 1965/66 and 1969/70.

JATZOLD R & BAUM E
TAN 207

The Kilombero valley: characteristic features of the economic geography of a semihumid East African flood plain and its margins with a review of development plans and possibilities. (Munich, Weltforum Verlag, 1968/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.28, 147 pp (P).

The physiological and ecological areas are described, together with the different agricultural uses to which man has put them. There is a detailed description of a typical village. A final chapter briefly describes development since the end of the 19th century, and discusses current problems.

ANON
TAN 208

The Marangu-Usseri road: economic feasibility report. (London, The Economist Intelligence Unit, 1966/Government of Tanzania) 76 pp (P).

A description of the resources of the area, in the Mount Kilimanjaro region, to be served by the road, and of agricultural production, mainly of a subsistence nature, with bananas as the largest cash crop. Estimates of movements of agricultural produce are given, in ton-miles, for the existing road, as well as for a reconstructed or a realigned road. Gross volume and value of production of 17 different products to be induced by the suggested road improvements by 1970 and 1985 are also estimated.

RALD J
TAN 209
Landbrugsarealets udnyttelse i Bukoba Distrikt. (The land-use pattern in the Bukoba District.) ("Geografisk Tidsskrift", Copenhagen, 1967, No.1, pp 76-80.)

Description of a district whose agricultural system comprises a subsistence and a cash crop intermixed with a livestock sector, and where rapid population growth and governments efforts to improve the system are slowly changing the land-use pattern. Farming is partly on private and partly on government land. (WAERSA 1502/1968.)

4. CO-OPERATIVE FORMS OF ENTERPRISE

PAULUS Margarethe
TAN 401
Das Genossenschaftswesen in Tanganyika und Uganda. (The nature of co-operation in Tanganyika and Uganda.) (Berlin, Springer, 1967/Munich, Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.15, 156 pp.

This comparative analysis of the development of co-operatives in Tanganyika and Uganda, and their tasks, deals first with the development potentialities of co-operatives in these two countries before and after independence. It then describes their tasks and aims and the measures needed to achieve them. The part played by the State in the expansion of the co-operative movement is explained, together with the relations between the marketing boards and the co-operatives. (WAERSA 1843/1968.)

GREEN G J B
TAN 402
Tanzania: an appraisal. ("Year Book of Agricultural Co-operation, 1967", London, Plunkett Foundation for Co-operative Studies, pp 203-213.)

A summary, together with the author's comments, of the Report of the Presidential Special Committee of Inquiry into the Co-operative Movement and Marketing Boards, June 1966, and of Government White Paper No.3, August 1966 (Proposals of the Tanzania Government on the recommendations of the Special Presidential Committee of Inquiry). The remedies propounded by the Committee, though imaginative and far-reaching, sometimes border on the impractical and unrealistic. The White Paper, more pragmatic, reduced the Committee's proposals to a form, content, and timing that makes their implementation administratively more possible.

5. CAPITAL AND CREDIT

SPALL W H
TAN 501
Establishing a land bank in Zanzibar. (Rome, FAO, 1964) EPTA Report 1892, 5 pp (not released).

ANON
TAN 502
Programme de crédit agricole - IDA/Tanzanie. (An agricultural credit programme.) (Paris, CEFEB, 1966) 10 pp.

The development of the co-operative movement and the current programme for co-operative credit are briefly described. The four-year programme (1965-69) covers cotton, coffee, tea, sisal, tobacco, fishing, pyrethrum, food processing, and a castor oil refinery.

Financing arrangements (IDA loan to the Tanzanian government, government loans to credit co-operatives, and advances by the co-operatives to individuals and producer co-operatives) are summarised.

6. LIVESTOCK PRODUCTION

SACHS R & GLEES A
TAN 601
Preservation of wildlife, utilisation of wild mammals, and processing of game-meat in Tanzania. (Report prepared for the Federal German Ministry for Economic Co-operation, 1967) 20 pp.

Economic and technical aspects of establishing an industry for processing about 4,000 tons a year of game-meat and edible offals, as well as inedible offals and hides, from the annual surplus animal population of the Serengeti game reserve, which is estimated at 118,000 head of Thomson gazelle, wildebeest, and zebra, apart from other species.

7. CROP PRODUCTION

LORD R F
TAN 701
Economic aspects of mechanised farming at Nachingwea in Tanganyika. (London, HMSO, 1963) 191 pp (P).

A description and economic assessment of farming operations of the Tanganyika Agricultural Corporation in an area of Southern Tanganyika on lands originally cleared as part of the abortive groundnuts scheme of the Overseas Food Corporation. The object was to investigate the possibilities of mechanised mixed farming in the area. Although groundnuts remained the most important crop at Nachingwea other crops and livestock have become of increasing economic importance. The land was at first all worked with hired labour, under European management. Later, three farms covering about 4,000 acres, were sub-divided into small 15-30 acre holdings for supervised letting to African tenants whose produce was marketed by the Corporation. The tenants could call on the Corporation's machinery for use on work beyond the capacity of themselves and their families.

As far as the tenanted farms are concerned, it is concluded that (a) over four years, average annual total income per tenant was between 50 and 300 per cent higher than that of Africans outside the scheme; (b) there was a strong element of subsidy, the margin to the Corporation of the farming operations, calculated after payment of a cash settlement to the successful tenants, being quite inadequate to meet its high operating costs (management, administration, and machinery), and amortisation of the original clearance scheme; and (c) there was little factual evidence available on the impact of the tenant scheme on the farming methods adopted by tenants on returning permanently to their own villages. Unless the ex-tenant showed determination he might in some areas find it difficult to continue using better methods in an atmosphere of apathy and even ridicule.

SCHEFFLER W
TAN 702
Bäuerliche Produktion unter Aufsicht am Beispiel des Tabakanbaus in Tanzania. (Supervised peasant production: an example of tobacco-growing in Tanzania.) (Munich, Weltforum Verlag, 1967/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.27, 192 p (P).

Study of the development of smallholder Virginia tobacco production in the framework of supervised schemes, official and semi-official. The relative advantages of different types of schemes are assessed.

MUSIC D A
TAN 703
Tanzania sisal. ("Monthly Bulletin of Agricultural Economics and Statistics", Rome, FAO, 1969, No.5, pp 1-8.)

Summary of a fuller report, made for the Fibres Section, Commodities and Trade Division of FAO, which examines the financing and costs of sisal production. Given present levels of sisal prices cif Europe, a profitable future seems likely only for those few estates producing at well below average cost for Tanzania as a whole. Output from such estates is not far from the potential future output figure of 170,000 tons a year currently much quoted. A reorganised and rationalised industry producing at this level is likely to be far lower in cost than that of the recent past, producing 220,000 tons. The rapid growth in quantities of sisal exported in finished form as cordage is also noted.

9. MARKETING/CONSUMPTION

KAINZBAUER W Der Handel in Tanzania. (Trade in Tanzania.) (Munich, Weltforum Verlag, 1968/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.18, 239 pp (P).
TAN 901

This publication describes marketing of and trade in various products of Tanzania, trade organisations, and the impact of government policies on trade. A large part of the text (pp 46-132) and of the appendix is concerned with marketing and agricultural products: crop products, timber, and animal products. It presents maps showing the centres of production of several crops, data on their production in the country, marketing systems, costs of marketing, and marketing organisations such as the National Agricultural Products Board and other marketing boards. (WAERSA 3432/1968.)

WINTER E H Livestock markets among the Iraqw of Northern Tanganyika. (In "Markets in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 457-468.)
TAN 902

Livestock markets are the main way in which the Iraqw are becoming integrated into the modern economy.

PATEL H D & RIORDAN E B Making the most of sisal exports: an analysis of prices paid to Tanganyika and Kenya. ("East African Journal of Rural Development", Nairobi, 1968, No.1, pp 39-47.)
TAN 903

National pricing policies for sisal exports are compared and differences in objective suggested as an explanation for the lower values with which Tanganyika appeared to be content in the early 'sixties for a higher-grade fibre.

HELLEINER G K Agricultural export pricing strategy in Tanzania. ("East African Journal of Rural Development", Nairobi, 1968, No.1, pp 1-17.)
TAN 904

A discussion of agricultural pricing policy as a weapon of economic development, and some recommended changes.

EAST AFRICAN COMMON SERVICES ORGANISATION The pattern of income expenditure and consumption of unskilled workers in Zanzibar. Report of a survey carried out in April 1962 (East African Statistical Department, 1963) 25 pp (P).
TAN 905

The survey, of 48 household budgets, based on a random sample, stratified into four groups by size of household, analyses earnings and other receipts and expenditure over a period of five weeks. Food consumption, for a wide variety of commodities, is estimated by value and quantity per adult equivalent for each of the four strata. Specimen budgets, one selected from each stratum as being most nearly typical, are also presented.

UNITED REPUBLIC OF TANZANIA Cotton-growing in the Lake Regions. A report of the household budget survey, 1 May-31 Oct.1966. (Dar-es-Salaam, Central Statistical Bureau, Ministry of Economic Affairs and Development Planning, 1967) 11 pp.
TAN 906

Methodology and background are described, and the structure of the households analysed. Income is broken down according to earnings from agriculture, livestock husbandry, other local products, wages and rents; expenditure by that on food and drink (each in detail), tobacco, clothing, housing and household, miscellaneous, and farming.

10. PROCESSING INDUSTRIES

VOCI J J & STONER J A F The reality of technical assistance. ("International Development Review", Washington,DC,1967, No.4, pp 10-16.)
TAN 1001

This account of the development of an agricultural processing industry in Tanzania in which technical assistance played a relatively unobtrusive yet vital role, is intended to help evaluate the effectiveness of technical assistance. In 1961 a team of experts drawing upon the available high-quality statistics and extensive specialised knowledge, compiled a report, subsequently published by the Tanzanian government under the title "Tanganyika Industrial Development - a preliminary study of bases for the expansion of industrial processing activities". The report specified priority rankings for the many industrial opportunities studied. Three criteria for evaluation were applied: (1) feasibility; (2) importance to the economy if feasible; and (3) probable time required for the project to reach commercial status. Topping the list in each of these categories was secondary processing of cashew nuts. (WAERSA 1344/1968.)

EISENLÖFFEL A & FISHER J Report to the government of Tanzania on brown sugar production, and general considerations on the processing of other agricultural products in Zanzibar. (Rome, FAO, 1967) UNDP Report TA 2381, 25 pp.
TAN 1002

A review of brown sugar and syrup production and processing, with economic analysis of the Chake Chake factory, and recommendations. By-products, especially alcohol and livestock feed, are considered. Notes and recommendations on vegetable oil milling and refining, vegetable ghee and soap manufacture, and cassava processing. (FAO 00895/1967.)

SCHADLER K Manufacturing and processing industries in Tanzania. (Munich, Weltforum Verlag, 1969/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.34, 55 pp (P).
TAN 1003

Classified analysis of medium- and large-scale industries in Tanzania, 1965/67, supplementing a study by the same author "Crafts, small-scale industries, and industrial education in Tanzania".

VON MASSOW H Industrialisierungsmöglichkeiten in Tanganyika. (Possibilities of industrialisation in Tanganyika.) (Pfaffenhofen, Afrika-Verlag, 1964) 164 pp (P).
TAN 1104

SCHLAGE C Polished versus whole maize: some nutritional and economic implications of the traditional processing of maize in Northeastern Tanzania. (Bumbuli, Max Planck Nutritional Research Unit, 1968) Bureau of Resource Assessment and Land Use Planning, Research Paper No.2, 17 pp.
TAN 1005

Traditional processing of maize by polishing and fermenting causes a gross loss of up to 50 per cent of calories and 40 per cent in protein, and almost total loss of vitamins and minerals. From this point of view the aggregate nutritional and financial loss, assuming 90 per cent of the annual maize crop of 0.75 mn. tons is processed on the farm, is seen to be very large indeed. But the author does not take into account either the comparative digestibility and palatability of polished and whole maize or the commercial use of waste products from polishing. The bran is, for instance, largely used for brewing. He recommends a further study to investigate the aggregate net loss of calories and protein from traditional processing methods.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

RAUM O F
TAN 1101
The human factor in the development of the Kilombero Valley. (Munich, Ifo-Institut für Wirtschaftsforschung, 1965) 56 pp.

Despite many social obstacles to development, some improvement in agricultural production, especially when co-operatively organised, has occurred since independence. Activities of experimental stations are described and future prospects for the region assessed.

VON GAGERN A
TAN 1102
Die afrikanischen Siedler im Projekt Urambo/Tanzania: Probleme der Lebensgestaltung. (African settlers and how they organise their life in the Urambo Scheme, Tanzania.) (Munich, Weltforum Verlag, 1969/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.38, 130 pp (P).

The management of market-orientated tobacco farms in the Urambo Scheme entails unfamiliar tasks for the settler. The economic and social implications of the Scheme, and the interdependence of family background, training, and success are examined.

ELLMAN A O
TAN 1103
Kitete, a land settlement scheme in Northern Tanzania. (In "Information on land reform, land settlement, and co-operatives", Rome, FAO, 1967, No.1, pp 12-21) (also French version).

A review of rural planning of the settlement area, with special reference to administrative and sociological aspects, as well as land tenure and financing. (FAO 00941/1967.)

13. STATISTICAL SERVICES

SETH G R
TAN 1301
The development of agricultural statistics in Tanzania. (Rome, FAO, 1965) EPTA Report 2019, 24 pp (not released).

Recommendations are made on sample surveys and training of staff.

TOGO 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE TOGOLAISE
TOG 101
Plan de développement économique et social, 1966-1970. (Paris, SIMAG, 1965) 221 pp (P).

The section on rural development (pp 97-160) includes investment and production targets for each of the five regions. There are a number of individual projects listed for increasing livestock production.

MONTENEZ J
TOG 102
Programme quinquennal d'aide à la production et à la diversification. (Five-year assistance programme for production and diversification.) (Paris, SEDES, 1964) 137 pp.

Assistance to production includes price support for groundnuts, cotton, and palm oil, and aids to structural improvements for groundnuts, cotton, and coconuts. Under the heading diversification is included provision of mobile processing plants for groundnuts, cassava, and palm oil; and development of livestock-raising.

WUELKER Gabriele Togo - Tradition und Entwicklung. (Togo - tradition
TOG 103 and development.) (Stuttgart, Ernst Klett, 1966/Federal Ministry for Economic Co-operation) 159 pp (P).

After a general description of the social, geophysical, tribal, and political structure of Togo, each of the following aspects of the economy are analysed: agricultural production (pp 48-57), employment, public finance, population, education, family influences and the place of women, social security and organisations, and public health. The study ends with an assessment of current development schemes and extension methods. It examines the interplay between progress and tradition, and concludes that the one cannot be achieved by ignoring the other.

2. REGIONAL STUDIES

VIGNAL P Projet de développement rural dans le Nord Togo. (Rural
TOG 201 development plan in North Togo.) (Paris, BDPA, 1964) 52 pp.

VIGNAL P Etude des possibilités d'aménagement de la vallée de l'Oti.
TOG 202 (Study of the prospects for developing the Oti Valley.) (Paris, BDPA, 1965) 78 pp.

ROBBE-GRILLET Anne Lise Plaine de la Fosse aux Lions. Etude agro-
TOG 203 socio-économique. (Agricultural, sociological, and economic study of the Fosse aux Lions Plain.) (Paris, BDPA, 1965) 147 pp.

ROBBE-GRILLET Anne Lise Plaine de Paiokou. Etude agro-socio-économique.
TOG 204 (Agricultural, sociological and economic study of the Paioukou Plain.) (Paris, BDPA, 1965) 130 pp.

ROBBE-GRILLET Anne Lise Plaines de la Fosse aux Lions et de Paiokou.
TOG 205 Etude comparative. (Comparative study of the Fosse aux Lions and Paiokou Plains.) (Paris, BDPA, 1965) 15 pp.

All these studies of North Togo preceded, and are therefore to some extent now only accessory to, the next one listed, though the basic technical information contained in them remains for the most part valid and is not fully duplicated in the later report.

GRIVEAU M Aspects agricoles et économiques du développement de la
TOG 206 zone sud-est de la région maritime du Togo (circonscription d'Anécho). (Economic and agricultural aspects of the development of the south-eastern zone of sea-board region of Togo (Anécho 'circonscription').) (Paris, BDPA, 1966) 84 pp.

Development of the area centres round the production and marketing of cassava. The importance of regular and adequate supplies reaching the Benin Company starch factory at Ganavé, by means of production contracts related to the starch content of deliveries, is again stressed. Although a supply of 60,000 tons of roots a year would seem to be a safe target, even allowing for the worst possible weather conditions, the plant is expected, after 1969, to show a profit with as low a throughput as 47,000 tons at 22 per cent average starch content, or 41,000 tons at 25 per cent.

GRIVEAU M *et al* Le développement de la région des savanes dans le
TOG 207 cadre du Plan quinquennal du Togo. (The development of the savanna region within the framework of the Togo Five-Year Plan.) (Paris, BDPA, 1966/République de Togo, Ministère de l'Economie Nationale) 2 vols. 334 pp.

Inventory of resources of the Dapango and Mango 'circonscriptions'; assessment of the present agricultural situation, and desirable developments (including infrastructure) in crop production and livestock-raising; cost/benefit analysis of such developments for the economy as a whole, for that of the savanna region, and at the level of the individual holding.

WHITE H P
TOG 208
'Terre de barre', the basis of a West African agricultural region. ("Bulletin de l'IFAN", Dakar, Jan.-Apr. 1965, pp 169-182.)

For summary see DAH 207.

5. CAPITAL AND CREDIT

LEGUAY W
TOG 501
Opération crédit dans la région maritime du Sud-Togo Anécho. (Rural credit plan in the sea-board region of Anécho, South Togo.) (Paris, BDPA, 1967) 62 pp.

Proposals made within the framework of 'operation cassava'. See also TOG 702.

6. LIVESTOCK PRODUCTION

MÜLLER J O
TOG 601
Probleme der Auftrags-Rinderhaltung durch Fulbe-Hirten (Peul) in Westafrika. Motivationen und Meinungen in Hinblick auf die Entwicklung der bäuerlichen Viehwirtschaft am Beispiel der Ewe und anderer Stamme in Togo. (Problems of contract cattle-keeping by herdsmen of the Fulbe (Peul) tribe in West Africa. Motivations and opinions regarding the development of peasant livestock-raising, based on the example of the Ewe and other tribes in Togo.) (Berlin, Springer-Verlag, 1967/ Munich, Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.14, 124 pp.

Sociological obstacles to the development of mixed farming in West Africa are closely examined through the example of Togolese tribes. (WAERSA 3047/1967.)

7. CROP PRODUCTION

COURS DARNE G
TOG 701
Etude pour l'amélioration de la production du manioc au Togo. (Study for improving cassava production in Togo.) (Paris, IRAT, 1966) 22 pp.

Mainly technical recommendations, with a note on the low starch content of many deliveries to the Ganavé factory. See also TOG 206 and TOG 1002.

ANON
TOG 702
Bilan au neuvième mois de l'opération manioc de la circonscription d'Anécho. Projet d'extension de cette opération. Etude des premières actions à mener dans les autres circonscriptions de la Région Maritime. (The cassava plan in Anécho 'circonscription' after nine months operation. Proposals for extending it. Study of preliminary action to be taken in other 'circonscriptions' of the Maritime region.) (Paris, BDPA/Lomé, SORAD Maritime, undated (?1967)) 122 pp and Annexes.

Progress has been on the whole satisfactory, but much remains to be done, particularly as regards extending the use of improved varieties of higher starch content and developing maize production on cassava-sick lands.

VIGNAL P
TOG 703
Le développement de la production de paddy et de riz dans la circonscription de Dapango. (Development of paddy and rice production in Dapango 'circonscription'.) (Paris, BDPA, 1964) 28 pp.

Present production (including costs and prices) is examined, and future possibilities for its extension, given technical economic and human limitations, explored. Present consumption, personal and market, and including illegal exports to Ghana, are estimated. The report considers, finally, the technical and financial aspects of setting up a pilot mill.

GILLIER P
TOG 704
L'arachide dans la région de Dapango. (Groundnuts in the Dapango Region.) (Paris, IRHO, 1966) 36 pp.

Present volume of production is not known with any certainty. Proposals for improved techniques and increased output are made.

ANON
TOG 705
Programme de développement de la culture du palmier à huile au Sud-Togo. (Development plan for oil palm cultivation in South Togo.) (Paris, IRHO, 1967/Répullique de Togo, Ministère de l'Economie Nationale) 5 vols.

Vol.I (29 pp) Summary report. Vol.II (117 pp) Basic research study: ecological and technical section. Vol.III (132 pp) Sociological and agricultural section. Vol.IV (137 pp) Regional studies: action proposed and financing. Vol.V Maps.

A comprehensive development and investment plan for the creation of a further 3,000 ha. of plantations (of which 2,400 in villages), in addition to the 500 ha. already in hand, giving an eventual estimated total yield (including that of existing natural palm areas) for Togo of 8,400 tons of oil and 2,100 tons of kernel, roughly sufficient to meet internal demand. One new extraction plant will be required.

8. IRRIGATION

MÜLLER J O
TOG 801
Soziologische Aspekte bei der Besiedlung von Bewasserungsprojektion in den Trockensavannen Westafrikas am Beispiel von Fallstudien in Togo. (Sociological aspects of settling irrigation areas in West African savannas: case studies from Togo.) (Göttingen University, Institut für ausländische Landwirtschaft, 1967) 15 pp.

The reasons why potential settlers were reluctant to migrate to irrigated areas are examined. There was uncertainty over rights of tenure in the new areas, and reluctance to give up family land where a millet crop could be grown and which constituted both an asset to be bequeathed and a hedge against the possible loss of their irrigated plot.

9. MARKETING/CONSUMPTION

LEPIGRE A & LEFEBURE H
TOG 901
Problèmes de conservation et de commercialisation du maïs au Togo. Rapport sur la mission effectuée au Nigéria, au Dahomey, et au Togo. (Storage and marketing problems for maize in Togo. Report of a mission to Nigeria, Dahomey, and Togo.) (Paris, IRAT, 1962) 145 pp.

Proposals for improved storage methods, and making the need for them better understood, as well as for official market intervention, in Togo, are presented in the light of practice in Dahomey and Nigeria.

FENN M G
TOG 902
Commercialisation des produits d'exportation. (Marketing export crops.) (Rome, FAO, 1965) EPTA Report 1981, 23 pp.

Proposals made to the Togo government for changes in the organisation and financing of the marketing of all export crops, especially of cotton.

10. PROCESSING INDUSTRIES

TYC J & CLEMENT P
TOG 1001
Projet d'équipement de Lomé dans le domaine de la transformation de la viande et du poisson. (Plan for equipping Lomé with meat and fish processing plant.) (Paris, SEDES, 1964) 167 pp.

Supply, demand, trade and marketing of meat and fish in the capital city. Demand projections for 1985. Technical recommendations.

ANON
TOG 1002
Extension de la féculerie de Ganavé: étude économique et financière. (Economic and financial study for the extension of the Ganavé starch factory.) (Paris, Compagnie de Benin, undated (?1965)) 39 pp and Annexes.

The report considers briefly the general impact on South Togo agriculture of the enlargement of the factory, which draws on supplies of cassava from a wide area.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

MÜLLER J O
TOG 1101
Enquête sociologique: le paysan face au développement. (A sociological enquiry into peasant attitudes to development.) (Munich, Ifo-Institut, 1965/EEC/Republic of Togo) 192 pp.

MÜLLER J O
TOG 1102
Beobachtungen zur Reaktion kleiner Landbewirtschafter in Togo auf Berater und Beratung. (Commentary on the reaction of smallholders to advisers and extension services in Togo.) (Göttingen University, Institut für ausländische Landwirtschaft.) ("Zeitschrift für ausländische Landwirtschaft", 1967, No.3, Aug. 1967, pp 278-292.)

Studies of rural populations in Togo and of the extent of their receptiveness to innovation.

12. RURAL/URBAN RELATIONS

AGBLEMAGNON F N
TOG 1201
Le rôle social, économique et politique des agglomérations urbaines: le cas du Togo. (The social, economic, and political role of urban growth: the case of Togo.) (Working paper No.23 for the 34th study session of INCIDI, Aix-en-Provence, September 1967) 17 pp (P).

The urban population is briefly analysed in its social, demographic, and political aspects. In Togo urban life is a relatively recent phenomenon. There is still a very close relationship between town and countryside. Barely 10 per cent of the population lives in towns, which are all small. Nevertheless cities are the main source of innovation, and although giving rise to a good many social antagonisms have so far grown at a sufficiently slow rate to avoid the bad physical conditions associated with mushroom growth in other developing countries.

13. STATISTICAL SERVICES

MARKOVIC B
TOG 1301
Le recensement de l'agriculture de 1961/62 et le développement des statistiques agricoles. (The 1961/62 agricultural census and the development of agricultural statistics.) (Rome, FAO, 1963) EPTA Report 1766 (not released) 29 pp.

IREN N K
TOG 1302
Etablissement de statistiques agricoles: rapport au gouvernement. (Report to the government on the establishment of an agricultural statistical service.) (Rome, FAO, 1967) 6 pp.

Recommendations on organisation and management of a statistical service.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DE TUNISIE, SECRETARIAT D'ETAT AU PLAN ET AUX FINANCES
TUN 101
Perspectives décennales de développement 1962-1971. (Ten-year development forecasts 1962-1971) 365 pp (P).

Agriculture (pp 148-204) (including projections to 1971).

DUWAJI G
TUN 102
Economic development in Tunisia: the impact and course of government planning. (New York, Praeger, 1967) 222 pp (P).

A general account of the Tunisian economy and of current development plans. The chapter on agriculture (pp 90-128) contains sections on the causes of the generally low yields in the traditional farming sector, on the organisation of agriculture (with emphasis on attempts to promote the co-operative movement), on the production of the main crops, on the extent of livestock-breeding by the nomad and semi-nomad part of the population, and on the agricultural development plan. (Tropical Abstracts r1754/1968.)

ANON
TUN 103
Actions de productivité en Tunisie. (Plans for improving productivity in Tunisia.) (Paris, Mission de Productivité en Tunisie, 1964) 56 pp (P).

A summary of current planning activity in agriculture and industry, including action already taken on the basis of earlier plans and studies (e.g., on olive oil production and marketing, sugar beet production, market-gardening, forage improvement, dehydration of vegetables, &c.).

ISNARD H
TUN 104
Le Maghreb. (The Maghreb.) (Paris, PUF, 1966) 272 pp (P).

A general geographical, economic, and political account.

KOOL R G A
TUN 105
L'agriculture tunisienne: analyse d'une économie en voie de modernisation. (Tunisian agriculture: analysis of a developing economy.) (Wageningen, Veenmar, 1963) 189 pp.

The last two chapters discuss the effects of increasing government intervention in the traditional agrarian pattern. (WAERSA 75/1967.)

PETIT J
TUN 106
Economic review of the Tunisian agricultural sector. FAO/IBRD mission, Aug.-Sept. 1965. (FAO/IBRD, 1965) 70 pp.

Draft (in English). A descriptive analysis of present policy and planning, and of specific development projects, with a brief appraisal of the current Four-Year Plan.

POUPON & PETITJEAN
TUN 107
Etude des critères de priorité des investissements dans l'agriculture en Tunisie. (Study of criteria for investment priorities in Tunisian agriculture.) (Tunis, SEDES/SCET (COOP), 1964/Secrétariat d'Etat au Plan et aux Finances) 2 vols.

Vol.1 (272 pp) Water and soil conservation. Vol.2 (37 pp) Summary report. An economic appraisal of anti-erosion measures.

JENTZSCH E G
TUN 108
Die Struktur des Nährungsversorgnung und der Landwirtschaftlichen Produktion Tunesiens in Vergangenheit, Gegenwart und Zukunft. (Food supplies and agricultural production in Tunisia, past, present and future.) (Berlin, Institut für ausländische Landwirtschaft an der Technischen Universität, 1965) 258 pp (P).

Includes the author's own forecasts of supply and demand for 1970.

VARIOUS
TUN 109
Estimation des conts de production et des revenus dans la Tunisie du Nord. (Estimate of production costs and incomes in Northern Tunisia.) (Paris, SEDES, 1963/République Tunisienne, Secrétariat d'Etat au Plan et aux Finances) (Unités Régionales de Développement) 325 pp.

An attempt to establish standard costs in agriculture which could be used in development programmes for estimating changes in farm incomes.

2. REGIONAL STUDIES

ANON
TUN 201
Gouvernorat de Tunis. Unités régionales de développement. (Tunis, SEDES, 1963) 12 vols. One volume for each of 10 regional units. Vol.11 (83 pp) Study of industries. Vol.12 (104 pp and Annexes) Summary.

Projections of agricultural production for 1971 are given for each regional unit and summarised in Vol.12 (pp 69-82).

ANON
TUN 202
Gouvernorat de Sousse. Unités de développement 1961-1971. (Tunis, ISEA/AN, 1963) 15 vols. One volume for each of 13 different development units, and Annexe 1. The olive forest of the Sahel de Sousse: modernisation of oil crushing plants in the 'Gouvernorat' of Sousse. The irrigated 'périmètres' (N banah). Annexe 2 The artisanal textile industry and its economic development.

202A
Gouvernorat de Médénine. Unités de développement 1961-1971 (Tunis, ISEA/AN, 1963) 2 vols.

Annexe 1 of the first study contains a micro-economic analysis of possible procedures for grubbing exhausted olive plantations, either partially by interplanting with other tree crops, or completely by conversion to other tree or field crops. Budgets are established at enterprise level, but no aggregate forecasts of the effects on supply are made.

FAO, ECONOMIC ANALYSIS DIVISION
TUN 203
Projet de planification rurale integrée de la Tunisie Centrale. (Proposed integrated rural plan for Central Tunisia.) (Rome, FAO, 1967) 232 pp.

Ten-year plan for integrated approach to rural development, with special reference to sheep-raising and dry-farming, rational water utilisation, and geographical allocation of arable and pasture. Planning of co-operatives and new economic structure for agriculture and related secondary and tertiary sectors. Returns on investment. Forecasts of reinvestment cycle, production targets, and regional employment levels. Agricultural extension and education.

KELLER C *et al*
TUN 204
Expérimentation agricole pour la mise en valeur de la Tunisie centrale. Vol.1 Résumés des résultats expérimentaux; conclusions et recommendations. (Agricultural experiment and the development of Central Tunisia. Vol.1 Summary of results; conclusions and recommendations.) (Rome, FAO, 1967) 184 pp.

Mainly a technical report, but contains data on use of agricultural equipment, mechanisation, and profitability.

FERAL *et al*
TUN 205
Gouvernorat de Gafsa. Etude des unités de développement. (Paris, BDPA, 1963/République Tunisienne, Secrétariat d'Etat au Plan et aux Finances.) Parts I to III (416 pp) and individual studies of 11 different development units.

TUN 205A
Gouvernorat de Sfax. Etudes des unités de développement. (Paris, BDPA, 1963/République Tunisienne, Secrétariat d'Etat au Plan et aux Finances.) Parts I to III (370 pp) and individual studies of 11 different development units.

Comprehensive descriptive analysis of the physical, human, and economic resources of the regions, and an assessment of the principal development problems.

GOSSELIN M
TUN 206
Les possibilités d'aménagement hydraulique et pastoral du Sud tunisien. (Results to be obtained from a planned improvement of water supplies and grazing lands in Southern Tunisia.) Tunis, Secrétariat d'Etat à l'Agriculture, 1963) 25 pp.

A mainly technical assessment of measures to be taken, together with an estimate of the potential capacity of the region.

3. LAND TENURE

CHARBONNIER F
TUN 301
Les réformes agraires en Afrique du Nord: Tunisie. (Land reform in North Africa: Tunisia.) (Paris, Fondation Nationale des Sciences Politiques: Centre d'Etudes des Relations Internationales, 1964) 37 pp (P).

A description of progress to date (March 1964) and summary of the proposed ten-year development to 1971.

CHEBRIL M
TUN 302
L'évolution du régime foncier tunisien en liaison avec les programmes de développement agricole. (Changes in land tenure in Tunisia in relation to agricultural development programmes.) ("Informations sur la réforme agraire", Rome, 1965, No.2, pp 13-26.)

An account of the radical land reforms introduced since independence and of their effects so far. (WAERSA 102/1966.)

ATTIA H
TUN 303

L'évolution des structures agraires depuis 1962. (Changes in the structure of agriculture since 1962.) ("Revue tunisienne des sciences sociales", Tunis, 1966, No.7, pp 33-58.)

The number and size of agricultural holdings was established by the 1961-1962 survey. The author makes some extrapolations in order to estimate the situation in 1968, with particular regard to the development of co-operative forms of farming.

4. CO-OPERATIVE FORMS OF ENTERPRISE

KLUYTENAAR J & PAN C L
TUN 401

Rapport au Gouvernement de Tunisie sur la gestion des terres agricoles par l'Office des Terres Domaniales. (Report to the Tunisian Government on the management of farm lands by the Public Land Office.) (Rome, FAO, 1962) EPTA Report 1576, 53 pp and Annexes.

At the request of the government the two experts made separate investigations. J KLUYTENAAR reported on management and accounting problems of the organisation set up to run the lands formerly farmed by French colonists. C L PAN's recommendations concern agricultural production methods in each of the areas under the Office's jurisdiction.

MENSCHING H
TUN 402

Das Medjerda-Projekt in Tunisia. Agrarwirtschaftlicher und sozial-geographischer Wandel in der Kulturlandschaft des Medjerda-Tales. (The Medjerda project in Tunisia. Agro-economic and socio-geographical changes of the landscape of the Medjerda Valley.) ("Erde", Berlin, 1962, No.2, pp 117-135.)

Land reforms will involve a change from prevailing extensive grain cultivation to labour-intensive and higher-yielding cultivations on irrigated fields. (WAERSA 244/1963.)

CHEREL J
TUN 403

Les unités coopératives du Nord-Tunisien. (Co-operative units in Northern Tunisia.) ("Tiers-Monde", Paris, No.18, April-June 1964, pp 235-254.)

The organisation of the co-operative production units in the North is briefly described. Their high degree of mechanisation must give rise to doubts about the soundness of the capital/labour ratio. Root and tree crops are being introduced to make the enterprises more labour intensive.

ANON
TUN 404

Rapport sur la situation des coopératives agricoles de la délégation d'Enfidaville. (Situation report on agricultural co-operatives in the 'délégation' of Enfidaville.) (Tunis, BDPA Mission en Tunisie, 1964) 22 pp.

Achievements so far, and future problems.

PARSONS K H
TUN 405

The Tunisian program for co-operative farming. ("Land Economics", Madison, Wisconsin, 1965, No.4, pp 303-316.)

Centrally-managed Production Unit Co-operatives are designed only as a transitional phase between traditional farming and self-managed co-operatives. Cereal producing co-operatives and animal producing co-operatives (requiring controlled grazing) will, however, of their nature have to remain under centralised control. (WAERSA 819/1966.)

PONCET J
TUN 406

L'expérience des 'unités coopératives de production' dans la région du Kef. (The 'co-operative production unit' experiment in the Kef region.) ("Tiers-Monde", Paris, 1966, No.27, pp 567-580.)

A critical review of a social experiment whose success is essential to solving the vast technical problems facing Tunisian agriculture. Some large mechanised mono-cultural cereal farms continue to be run by their Tunisian owners, but yields are stationary or falling. Former colonists' farms have been taken over on a quasi-collective basis.

ZGHAL A
TUN 407
Cadres et ouvriers qualifiés dans le nouveau système agricole. (Agricultural cadres and qualified workers in the new agricultural system.) ("Revue tunisienne de sciences sociales", Tunis, 1966, No.7, pp 136-152.)

Developments in the training of agricultural experts, their social and geographical origins, and their attitudes, are discussed.

MOORE W P & LEWIS M S Agrarian reform and the development of agricultural
TUN 408
co-operation in Tunisia. ("Year Book of Agricultural Co-operation, 1968", Plunkett Foundation for Co-operative Studies, Oxford, Blackwell, 1968, pp 29-52 (P).)

A description of the new agricultural structures created since independence, a summary of an official survey of production co-operatives made in 1964/65, and a brief analysis of the main social and economic factors influencing the co-operatives at their present stage of development.

6. LIVESTOCK PRODUCTION

GOORMAGHTIGH P Rapport au gouvernement de la Tunisie sur les possi-
TUN 601
bilités de développement des productions bovine et ovine. (Report to the Tunisian government on the possibilities for developing cattle- and sheep-raising.) (Rome, FAO, 1966) 20 pp.

A brief description of present supply, demand, and stock-raising methods. Recommendations for improved breeding, feeding, artificial insemination, and extension services.

LE HOUEROU H N Le développement de la production fourragère et
TUN 602
pastorale. (The development of forage production and grazing.) (Rome, FAO, 1967).

Mainly technical recommendations. Review of seed production.

7. CROP PRODUCTION

BADIER P
TUN 701
Projet de planification rurale integrée de la Tunisie centrale. Oliviers, olives, huile. (Integrated rural development plan for central Tunisia: olive trees, olives, and olive oil.) (Paris, BDPA, 1966/FAO) 44 pp.

Present production levels and likely future trends are examined, as well as processing capacity and demand for oil. Technical and economic problems for the future, with special reference to Central Tunisia, are considered, and desirable changes outlined.

AOUNALLAH M
TUN 702
La rénovation de la culture de la fraise dans la région de Tabarka. (The renewal of strawberry-growing in the Tabarka region.) (Tunis, Secrétariat d'Etat à l'Agriculture, 1964) 5 pp.

An examination of technical problems, especially of disease, and potential European markets.

CODA-NUNZIANTE G
TUN 703
Outlook for production and trade of selected horticultural products in Mediterranean countries: report on Tunisia. (Rome, FAO, 1967) 57 pp.

Production of, and trade in, fruit and vegetables, especially citrus, potatoes, tomatoes, and artichokes, and forecasts of future output.

LAUWERS C
TUN 704
L'agrumiculture tunisienne. (Citrus-growing in Tunisia.) (Université Catholique de Louvain, 1966) (thesis) 93 pp.

A mainly technical and micro-economic study is preceded by a general introduction. A final chapter considers future outlets for Tunisian citrus in Europe following the loss of the preferential French market.

8. IRRIGATION

PAN C L
TUN 801
Amélioration de la production des cultures irriguées. (Improved production of irrigated crops.) (Rome, FAO, 1964) EPTA Report 1923, 25 pp.

In the light of experience with irrigated crops in the Mejerda valley since 1958, extended production is recommended there of rice, kenaf, Alexandria clover, tomatoes, pimentoes, cotton, and sugar-beet. The report also recommends the building of a small dam on the upper reaches of the river Khebir which would make the Tabarka valley a centre for rice production.

9. MARKETING/CONSUMPTION

ANON
TUN 901
Le marché tunisien. (Markets of Tunisia.) ("Marchés tropicaux et méditerranéens", June 1965, No.1023, pp 1399-1540.)

A general survey of markets in all sectors.

ANON
TUN 902
Le marché du bétail de réproduction et d'élevage et le marché du bétail de boucherie et des viandes en Tunisie. (The market for breeding and store cattle, for fat cattle, and for meat in Tunisia.) (Paris, CNCE, 1964) 303 pp (P).

BOULARD J
TUN 903
Etude des débouchés européens de la production de viande ovine en Tunisie. (Study of European market outlets for Tunisian mutton and lamb.) (Paris, SEDES/SCET (COOP), 1964) 99 pp.

Assessment of European markets for mutton and lamb up to 1970. Production, veterinary, and marketing problems involved in building up an export trade are examined.

WARNOD A
TUN 904
Etude des critères de priorité des investissements dans l'agriculture en Tunisie. (Study of the criteria for investment priorities in Tunisian agriculture.) (Tunis, SEDES/SCET (COOP), 1964/Secrétariat d'Etat au Plan et aux Finances) 5 vols.

Vol.1 (121 pp) The market for wine. Vol.2 (171 pp) The market for citrus. Vol.3 (191 pp) The market for olive oil. Production, consumption, export prospects.

FAO ECONOMIC ANALYSIS DIVISION Planification de la Tunisie centrale:
TUN 905 les problèmes de la commercialisation. (Planning in Central Tunisia: marketing problems.) (Rome, FAO, 1966) 83 pp.

Economic appraisal of wholesale marketing of cereals, citrus, and olive oil. Survey of present trade and markets. Economic aspects of marketing policy, including livestock products.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

ATTIA H
TUN 1101 Modernisation agricole et structures sociales: exemple des oasis du Djerid. Acte du séminaire de sociologie rurale tenu au CERES 28-30 avril 1964. (The modernisation of agriculture and the influence of social structures: the example of the oases in the Djerid. Proceedings of a seminar held at the Centre d'Etudes et de Recherches Economiques et Sociales, Tunis, 28th-30th April 1964.) ("Revue tunisienne de sciences sociales", Tunis, 1965, No.2, pp 59-79.)

The close connection between social and agricultural change has often been ignored by development agencies, whose plans tend to involve purely technical solutions.

ZGHAL A
TUN 1102 Modernisation de l'agriculture et population semi-nomade (Acte du séminaire de sociologie rurale tenu au CERES 28-30 avill 1964). (The modernisation of agriculture among a semi-nomadic population. Proceedings of the seminar on rural sociology held at the Centre d'Etudes et de Recherches Economiques et Sociales, Tunis, 28th-30th April 1964.) ("Revue tunisienne de sciences sociales", Tunis, 1965, No.2, pp 31-49.)

Problems of adapting semi-nomadic populations, and lessons to be learned from the results achieved by the sometimes heavy-handed action of the authorities in trying to bring it about.

ZGHAL A
TUN 1103 Modernisation de l'agriculture et populations semi-nomade. (The modernisation of agriculture among a semi-nomadic population.) (The Hague, Mouton, 1967) 186 pp (P).

An analysis of the social situation arising from the application of modern ideas in a traditional society. Planners should take account of the self-respect of the peasants involved as well as of the rational improvements of agriculture. Plans for each of four areas within the Kairouan governorate are critically examined, and changes in the administrative system proposed. (WAERSA 2929/1968.)

12. RURAL/URBAN RELATIONS

BOUDHIBA A
TUN 1201 Bédouinisme et 'beldisme' dans la Tunisie actuelle. (Bedouinism and beldism in present-day Tunisia.) (Working paper No.11 for the 34th study session of INCIDI, Aix-en-Provence, September 1967) 13 pp (P).

In the Arab world the 'beldi', the small town-dweller, provides a cultural link between the inhabitants of the larger cities and those of the countryside (even the nomadic bedouin) which is often much more tenuous in other parts of Africa. In Tunisia, too, both French settlement (and military service) and the independence movement which opposed them from the 'thirties onwards, each tended to bring the countryman into direct contact with an urbanised society. This has, in the author's view, eased the enormous task of social and economic integration which his country is now undertaking.

13. STATISTICAL SERVICES

IGNATIUS J G W Organisation et développement de la statistique agricole.
TUN 1301 (Organisation and development of agricultural statistics in Tunisia.) (Rome, FAO, 1964) EPTA Report 1906, 8 pp (not released).

The results of a 1961/62 survey, relating to cereals, meat, fruit, and vegetables are analysed. Data of other products, and of prices, are considered inadequate. Further surveys, and the organisation of statistics on a regional basis, are recommended. (WAERSA 3149/1965.)

FOJTL J Rapport au gouvernement de la Tunisie sur le développement
TUN 1302 des statistiques agricoles. (Report to the Tunisian government on the development of agricultural statistics.) (Rome, FAO, 19666) 24 pp.

A supplementary report describing the main sources of agricultural statistics in Tunisia, assessing their value, and making recommendations for future action, both administrative and general, and for particular types of survey.

UGANDA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

UGANDA GOVERNMENT, MINISTRY OF PLANNING Work for progress: the
UGA 101 Second Five-Year Plan (1966-1971). (Entebbe, Government Printer, undated) 182 pp (P).

Under the Rural Sector (pp 55-76) targets for development expenditure and for output by 1971 are listed for all main products, and expenditure budgeted for irrigation and agricultural credit. The section on Projects (pp 77-88) lists investment targets and projections of gross output and GDP by branch and sub-sector of industry, including manufacture of food products, cotton ginning, coffee curing, textile, leather and rubber manufacture.

GORMELY P J The economic development of Uganda with special reference
UGA 102 to the 1966-1971 plan. ("Dissertation Abstracts", Ann Arbor, Michigan, No.3834, 1968).

This study (1) attempts to set out the important features and recent performance of the economy of Uganda, relying heavily on recent surveys and censuses which provide bench-mark data on population, agriculture, and industry, and (2) attempts to evaluate the 1966-1971 Plan. Both the aggregate implications of the Plan and some specific projects in the Plan are criticised. Among individual chapters, II surveys natural resources and infrastructure, III discusses human resources, education, and employment, and V investigates agriculture. (WAERSA 3164/1968.)

ANON Development planning in Uganda. Paper presented to the
UGA 103 Conference of African Planners, Addis Ababa, December 1967. (Addis Ababa, UN Economic and Social Council) 13 pp.

Differences between pre- and post-independence planning are described, and a critical appraisal made of current planning procedures, including regional planning, and future objectives.

UGANDA GOVERNMENT Report on Uganda census of agriculture. (Entebbe,
UGA 104 Government Printer/Ministry of Agriculture and Co-operatives) 4 vols. (P).

Vol.I (1965) (89 pp) describes the history, objectives, organisation, and methodology of the 1963/54 census. Census data are given on holders, their households, holdings, employed labour, and livestock.

104A Vol.II gives results of the special census carried out in Karamoja District which, because of the largely nomadic pattern of its livestock-raising, could not be fitted into the overall sampling plan.

104B Vol.III (1966) (153 pp) contains an analysis of census data on size of holdings and on areas of all main cash and food crops.

104C Vol.IV (1967) (47 pp) analyses the findings of Phase II of the census, for which field work was continuously in progress between October 1964 and October 1965, covering yields of all main crops. Planning and methodology are described.

CLARK P G Strategy for development in an early-stage underdeveloped
UGA 105 economy: Uganda. Paper presented to the 1965 annual meeting of the African Studies Association. (Williamstown, Mass., Center for Development Economics, 1965) 23 pp and Notes.

A discussion of the logic of five major structural changes: A - raising the share of investment in the national product; B - accelerated expansion of agricultural exports; C - extensive import substitution in manufacturing; D - raising the share of taxes in the national income, with associated changes in the tax structure; and E - expanding secondary and higher education.

FISCHER W E Probleme der meerfernen Länder am Beispiel Ugandas.
UGA 106 (Uganda as an example of the problems of landlocked countries.) (Munich, Waltforum Verlag, 1969/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.41, 262 pp (P).

The economic geography of a landlocked country is described, and its effects on development past and present. Uganda's legal, political, and economic problems are examined.

METTRICK H Aid in Uganda - agriculture. (London, Overseas Development
UGA 107 Institute, 1967) 135 pp (P).

Details are given of bi-lateral, by countries, and multilateral aid to Uganda up to 1966, and the main purpose of the study is to establish desirable criteria for future aid projects and the best methods of channelling funds. The first part, however, deals with the main aspects of agricultural development: production, manpower and education, marketing, commodity prices, and credit. The problems in each sphere particular to Uganda are discussed. A separate chapter describes past and current development plans and policies.

2. REGIONAL STUDIES

ANON Mount Elgon transportation study. (London, The Economist
UGA 201 Intelligence Unit/Scott & Wilson, Kirkpatrick & Partners, 1966/Government of Uganda) 164 pp (P).

The physical and human resources of the area, and the structure of its agriculture (pp 12-26) are described, as well as existing plans and policies for coffee, tea, and vegetable production, dairying, and sheep farming. The methodology is presented for estimating future values (crop yields and prices) of autonomous development and of that expected to be induced by the proposed road development. For each of eight roads the human and physical resources of the areas to be served by them, and the existing pattern of land use, is described; development prospects with or without the road are assessed; a cost/benefit ratio established; and engineering considerations set out.

4. CO-OPERATIVE FORMS OF ENTERPRISE

PAULUS Margarethe Das Genossenschaftswesen in Tanganyika und Uganda.
UGA 401 (The nature of co-operation in Tanganyika and Uganda.) (Berlin, Springer, 1967/Munich, Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.15, 156 pp (P).

For summary see TAN 401.

VARIOUS Report of a seminar on the role of the co-operatives in
UGA 402 Uganda, Sept. 25-Oct.7, 1966. (Kampala, Uganda Press Trust, 1967/Milton Obote Foundation/Friedrich-Ebert Stiftung) 165 pp (P).

Includes papers on management, marketing, operation, legislation, credit, savings, and group farms.

OLOYA J J Some aspects of the development of the co-operative movement
UGA 403 in Uganda, 1957-1967: capital structure and problems encountered. ("Tropical Agriculture", Trinidad, 1968, No.4, pp 317-322. London, Butterworth, for University of the West Indies, Faculty of Agriculture.)

The co-operative movement has a monopoly of cotton ginning, but there are still substantial private interests in the marketing of coffee, minor crops, and (at the export stage only) tea. Co-operatives have made generally satisfactory progress in the fields of marketing, credit and thrift, and group farming, but there are difficulties ahead, especially over staffing, and the world coffee surplus presents serious problems.

FORBES WATT D Mechanised group farming in Uganda. ("Land Reform, Land
UGA 404 Settlement, and Co-operation", Rome, 1968, No.1, pp 1-12.)

Recent economic experience in Uganda with the mechanisation of traditional agriculture through direct public investment in group co-operative farming and tractor hire schemes is examined. Previous mechanisation schemes have not been profitable, probably because in their formulation little account was taken of earlier economic and social experience. The 1967-71 programme again does not consider the economic record, and the proposal of starting 20 new farms annually could lead to a direct loss of over £5 mn. Profitable mechanisation is seen as depending on micro-economic analysis of the separate mechanised stations. Cost/benefit considerations identify two types of problem at the farm level: (1) the necessity of adopting certain procedures in the use of mechanical equipment which are essential to economic viability if not technically optimal, and (2) the importance of blending mechanical techniques with local agricultural practice, including cultural considerations. The project at present requires consolidation and experiment within the farms already started. (WAERSA 3735/1968.)

5. CAPITAL AND CREDIT

KOHN P — Economic survey of a pilot credit scheme ~~in Ug~~anda.
UGA 501 — (Rome, FAO, 1963) 4 pp and Tables (not released).

HUNT Diana M — Agricultural credit in Uganda. (University of East
UGA 502 — Africa, 1967) 540 pp (D.Phil. thesis).

Developments since 1950 and the methodology of the current survey are described. Existing sources of credit and its users are analysed: the Progressive Farmers' Loan Scheme; co-operative credit; credit from non-government sources; and credit for a number of particular types of farm enterprise (tea-outgrowing, flue-cured tobacco production, ranching, dairy farming, and group farming). There is a critical appraisal of the plan drawn up in 1966 for providing credit, particularly short-term credit, through the co-operative movement. 162 farmers who received credit and 93 who did not were interviewed.

6. LIVESTOCK PRODUCTION

MARPLES H J S et al — An analysis of a commercial herd of dairy cattle
UGA 601 — in Uganda. ("Tropical Agriculture", Trinidad, 1967, No.1, pp 69-75.) (London, Butterworth, for University of the West Indies, Faculty of Agriculture.)

An analysis of herd production of cattle of European breed, 1962-1966. The very satisfactory performance suggests that development of the dairy industry in the fertile crescent of Uganda has been delayed by the attention paid in the past to climatological data transposed from other tropical countries. This has excluded the introduction of European breeds. (Tropical Abstracts q814/1967.)

ANON — Uganda, the potential for pig-farming. (London, P-E
UGA 602 — Consulting Group Limited, 1966/Uganda Development Corporation) 15 pp.

An analysis of current production and of the main factors influencing output. Problems of feeding, slaughtering, and distribution are examined. Market prices, imports, and factors influencing future demand are analysed.

7. CROP PRODUCTION

McMASTER D N — Land use survey of Uganda. (Bude, Geographical Publica-
UGA 701 — tions Limited, 1962) World Land Use Survey, Occasional Paper, No.2, 111 pp (P).

Though not primarily a work of economic analysis, the survey provides much basic data (mainly 1958) relevant to the economics of agriculture in Uganda. There is a detailed description of the geographical distribution of major subsistence crops, their varieties, ecology, the advantages and disadvantages of the different methods of cultivating them, and current trends in distribution. The crops are grouped as follows: cereals (finger millet, sorghum, maize, and rice); root crops (cassava and sweet potatoes); oil crops (groundnuts and simsim); and pulse crops (mixed beans, cow peas, and pigeon peas). A separate section describes patterns of African agriculture.

FOSTER P & YOST L — Buganda rudimentary sedentary agriculture. (University
UGA 702 — of Maryland, Department of Agricultural Economics, 1967) Miscellaneous Publications No.590, 43 pp (P).

Case study of a smallholding tenanted and operated by a single man mainly on a subsistence basis, but with some cash crops of which coffee is the most important, and without any livestock. The farmer's social and economic motivation, his cash and estimated real income, capital and capital formation, are all examined. The social structure of the village, and the private and co-operative buyers and suppliers serving the village, are also described.

ANON Uganda, the potential for increased rice production.
UGA 703 (London, P-E Consulting Group Limited, 1967/Uganda Development Corporation.)

Domestic production and imports are analysed. Factors affecting rice-growing, prices, and quality are examined, as well as export markets and trends. The future outlook for rice-growing in Uganda is assessed.

ANON Uganda, the prospect for avocado production. (London,
UGA 704 P-E Consulting Group Limited, 1967/Uganda Development Corporation.)

Production and growing areas are analysed; technical desiderata are listed; and prices and distribution channels in Uganda, and supply and demand in the main producing and importing countries examined.

8. IRRIGATION

HALCROW Sir W & Partners Irrigation in Uganda, December 1964.
UGA 801 (London, Ministry of Overseas Development, 1965) 119 pp.

A feasibility report.

9. MARKETING/CONSUMPTION

MARTIN Anne The marketing of minor crops in Uganda. (London, HMSO,
UGA 901 1963) 78 pp (P).

Marketing arrangements for ten non-perishable minor crops characteristic of peasant production are described: maize, finger millet, sorghum, pulses, groundnuts, castor seed, sunflower seed, sesame, chillies, and spices. The second part of the study considers a number of problems, and their remedies, arising out of market structure, farmers' attitudes and responses, official attitudes, quality, storage, price fluctuations and controls, co-operatives, and market intelligence. A growing responsiveness amongst Uganda farmers to economic incentive is noted, and the importance is stressed of improving the economic position of the more forward-looking, and not merely their technical efficiency regardless of real cost and alternative opportunities.

FAO ANIMAL PRODUCTION AND HEALTH DIVISION Marketing of livestock and
UGA 902 meat in Uganda. (Rome, FAO, 1967) East African Livestock Survey, 45 pp and Appendixes.

An appraisal of statistics of animal production and of supply of and demand for meat. Trends in consumption and trade are analysed for beef, and goat and sheep meat. A feasibility study for the establishment of a slaughterhouse and meat processing plant is presented in the light of the potential development of wholesale marketing and per head consumption. Present marketing arrangements for carcases, lean meat, edible offals, and hides and skins are examined. Recommendations are made on improving transport, cattle trails, and veterinary inspection; on price policy; and of staff training problems. (FAO 00483/1967.)

ANON
UGA 903

A survey of wholesale and retail beef prices. (London, P-E Consulting Group Limited, 1966/Uganda Development Corporation) 51 pp.

Wholesale and retail prices and price trends in Uganda are analysed; distribution and marketing methods described; and the size of the market and volume of beef output examined.

HALL A S M
UGA 904

Report to the government of Uganda on the Lint Marketing Board. (Rome, FAO, 1967) UNDP Report TA 2382, 65 pp and Appendixes (not released).

A review of the Board's procedures for purchase and sale of cotton lint and cotton seed, its price policy, schemes for quality standards and incentives, and policy for the ginning industry. Reccomendations are made on administrative aspects of the Board's activities, on costs, and on price policy. (FAO 00891/1967.)

ANON
UGA 905

Market surveys. (London, P-E Consulting Group Limited/Uganda Development Corporation.)

905A Export markets for minor crops (1966) 46 pp.

Factors affecting export opportunities (production and import trends in foreign countries, prices, quality, and utilisation) for oils and oilseeds, oilcakes, meals and grains.

905B The market for stockfeeds (1966) 12 pp.

The size and structure of the market in Uganda, the distribution system, sources of supply, price structures and terms of trade, are described and analysed.

905C The market for root ginger (1967) 18 pp.

A preliminary survey. Supply and demand in the principal exporting and importing countries, and trends in trade and prices are analysed.

905D Production and marketing of tobacco leaf (1966) 23 pp.

Quantities and types of leaf grown and marketing methods are analysed, with special reference to growers' organisations and co-operatives. Markets for home-grown leaf are identified, and future demand estimated.

905E Brushware (1964) 23 pp.

The size of the Ugandan market, distribution system, and pattern of demand for locally-made and imported brushes are examined, and consumption in East Africa estimated. Commercial practices, prices, discounts, and mark-ups are described.

905F Hessian (1964) 5 pp.

Trends in supply and demand in East African and Ugandan internal consumption are analysed.

905G Jute, sisal, and combination bags and sacks (1964 and 1967) Two reports, 14 pp.

Trends in East African direct imports and territorial consumption rates, Ugandan consumption by type and end use are analysed.

905H Present and future consumption of natural rubber in East Africa (1966) 16 pp.

Present consumption rates and factors influencing them are analysed, and future consumption estimated, by end use.

UGANDA GOVERNMENT, MINISTRY OF PLANNING AND ECONOMIC DEVELOPMENT

UGA 906 The patterns of income and expenditure of coffee-growers in Buganda, 1962/63. (Kampala, Statistics Division, 1967) 12 pp and Annexes.

906A The patterns of income, expenditure and consumption of African unskilled workers in Kampala, February 1964. (Kampala, Statistics Division, 1966) 16 pp and Annexes.

906B The patterns of income, expenditure and consumption of African unskilled workers in Jinka, June 1965. (Kampala, Statistics Division, 1966) 22 pp and Annexes.

For each survey methodology is described. In the case of the two urban surveys, income, and itemised food and non-food expenditure, per head, are analysed by income group, tribe and family status, and household. For the country survey the data are presented in less detail and aggregated only, but incidental information on the age and education of heads of households, and of ownership of durables, is included.

CLEAVE J H
UGA 907 Food consumption in Uganda. ("East African Journal of Rural Development", Nairobi, 1968, No.1, pp 70-87.)

An estimate of the food requirement of the Uganda population is compared with an estimate of food availability. It is emphasised that considerable error is possible in both calculations but that the two independent estimates are broadly consistent and, it is suggested, more realistic than earlier attempts to define the food situation in Uganda. The picture which emerges is consistent with observed conditions within the country. The supply of calories is adequate without being excessive, and reserves exist which can be called upon should abnormal conditions prevail. Protein supplies are also adequate overall, but protein intake varies between areas of the country and sections of the population, and as a result deficiency symptoms are observed. Resources are available to meet the food needs of the population: the major obstacle to the elimination of protein-calorie deficiencies is the ignorance of the consumer. (WAERSA 3349/1968.)

10. PROCESSING INDUSTRIES

ZWANKHUIZEN M T
UGA 1001 Improved processing, handling, storage and utilisation of agricultural products, and the role of agriculture in the build-up of agricultural development. Paper read to the National Training Centre on Agricultural Marketing, Uganda. (Rome, FAO, 1967) 22 pp.

An examination of the role of industrialisation in Uganda. Processing of animal, fishery, forest, and food products is discussed. (FAO 00277/1967.)

ANON
UGA 1002 Soluble coffee. (London, P-E Consulting Group Limited, 1964 and 1966/Uganda Development Corporation) Two reports, 12 pp.

A study of the size of the East African market and of the economics of manufacture, and quotations for soluble coffee plants.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

HUTTON C
UGA 1101 Nyakashaka: a farm settlement scheme in Uganda. ("African Affairs", London, Oxford University Press, 1968, No.267, pp 118-123.)

Description of a church scheme for settling school-leavers on unreclaimed land to build up their own tea smallholdings under supervision. Only seven of the 108 young men in their early twenties who took part over a period of five years withdrew or were evicted as inefficient. A sample surveyed in 1966 were generally satisfied that their financial and social status was potentially as secure as that of the majority of their educated contemporaries since top-level white-collar jobs are at present only accessible to the very few. The dependence of the scheme on high-grade expatriate management during the first few years of the settlers' training, as well as on a satisfactory level of world tea prices, is noted. The settlers were carefully selected, and in view of the difficulty of finding the right type of school-leaver for such a scheme it will probably have a more widespread effect for agricultural development in the long run to use ordinary extension methods to reach those young men with education who already have access to family land.

12. RURAL/URBAN RELATIONS

KIWANUKA M S M Town agglomeration in Uganda. Working paper No.22
UGA 1201 for the 34th study session of INCIDI, Aix-en-Provence, September 1967. 5 pp (P).

A brief description of the present pattern of urban development. Owing to the development during colonial times of a rural cash economy of plantations and peasant smallholdings, the towns have not been a magnet for rural under-employed in the same way as in other African countries. Most of the immigrants from neighbouring countries came to Uganda to work on the land. Until quite recently the relatively small urban population (now about 200,000) was predominantly non-African. The advent of African administrative cadres has, however, created problems of integration with the large Indian minority. These will now tend to be aggravated by the influx of African school-leavers, of whom there will be nearly 100,000 a year and for whom there will be insufficient employment on the land.

KLEIN E C Sozialer Wandel in Kiteezi/Buganda, einem Dorf im Einfluss-
UGA 1202 bereich der Stadt Kampala. (Social change in Kiteezi (Buganda), a village within the sphere of influence of the town of Kampala.) (Munich, Weltforum Verlag, 1969/ Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No. 46, 144 pp (P).

13. STATISTICAL SERVICES

CASLEY D J L Report to the government on the first census of agri-
UGA 1301 culture and future development of agricultural statistics. (Rome, FAO, 1967) UNDP Report TA 2309, 13 pp (not released).

An assessment of the census, and recommendations on the methodology of data collection and analysis, estimating, and sampling. (FAO 00264/1967.)

HIEBER H Entwicklunsländer dargestellt am Beispiel Ugandas. (Uganda
UGA 1302 as an example of (statistics in) developing countries.) (Munich, Weltforum Verlag, 1969/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.40, 224 pp (P).

With Uganda as an example, the present state of economic statistics in developing countries, and the conditions necessary for their further extension, are discussed.

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIQUE DE HAUTE-VOLTA, PRESIDENCE DE LA REPUBLIQUE Plan cadre 1967-70.
UPV 101 (Outline plan 1967-70.) (Ouagadougou, 1967), 2 vols. 332 pp and 476 pp (P).

In Vol.I, the section on rural development (pp 21-106) gives a general outline of the national and regional plans and their main targets. Livestock development is dealt with in a separate part of the plan, and there is a section on distribution of water supplies and irrigation (involving no new dams). A number of statistical surveys are proposed including an annual survey of crop yields and a household budget survey in 1970. An enquiry is also to be made into the possibility of establishing fixed agricultural prices by regions, and, for export crops, at national level. Vol.II gives details of regional plans and of proposals for the production and marketing of livestock (pp 31-258). Production targets are set and investment costs estimated.

ANON
UPV 102 Orientations générales du plan cadre (1967-1970) de la Haute-Volta. (Main guide-lines of the Upper Volta 1967-1970 Outline Plan.) ("Bulletin de l'Afrique noire", 1967, No.476, pp 9607-9621.)

After various false starts in national planning (an Intermediate Two-Year Plan for 1963-64 taking the place of the Five-Year 1963-67 Plan originally envisaged), the present Outline Plan lays down the main guide-lines for development policy, in all sectors, pending the introduction during the course of its period of application of a full-blown Five-Year Plan for 1971-1975. Targets for marketable surpluses of all the main crops are set for 1970, together with a substantial increase in output in meat from a relatively stationary cattle population.

ANCIAN G & MANLHIOT B Les actions de développement rural en Haute-Volta.
UPV 103 (Rural development in Upper Volta.) (Paris, SEDES, 1965). Vol.IV, Section V of "Le développement rural dans les pays d'Afrique Noire d'expression française" (Rural development in French-speaking black Africa) (Direction Générale à la Recherche Scientifique et Technique) pp 1-76.

A critical appraisal of development policies, both for individual crops, especially groundnuts, and for mixed farming, between 1950 and 1965. See AFR 113.

GERARDIN B Le développement de la Haute-Volta. (Development in Upper
UPV 104 Volta.) ("Cahiers de l'ISEA", Paris, 1963, No.142) 205 pp.

A description of the economy at the time of the formulation of the proposed first Plan, and an analysis of the planning resources, in terms of both personnel and finance, available and of desirable objectives.

GAT ZVI WEIZMAN L et al Rapport de la mission agricole israélienne en
UPV 105 Haute-Volta. (Report by the Isareli agricultural mission to Upper Volta.) (Jerusalem, Département de la coopération internationale, 1963) 142 pp.

Situation report, followed by recommendations (mainly technical), on four main aspects of the country's agriculture: accelerated development of food crop production; development of water resources; development of beef production; and possibilities of poultry production. Estimated investments required are summarised separately.

BESSIS A C et al Report of a mission for the study of problems and prospects
UPV 106 in the rural development of Mali, Niger, and Upper Volta. (Addis Ababa, UN/ECA, 1966) 246 pp.
For summary see MAL 106

KELLERMANN J
UPV 107
Etude des possibilités de diversification de la production rurale en Haute-Volta. (Study of the possibilities for diversifying rural production in Upper Volta.) (Paris, SEAS, 1967/République de Haute-Volta) 124 pp (P).

The author concludes that natural conditions are not very favourable for any diversification. Although opportunities should not be neglected, intensifying traditional production is preferable. The main lines for future policy are suggested.

2. REGIONAL STUDIES

MANLHIOT B & AUBERT C
UPV 201
Aspects agricoles du développement dans une zone d'action intégrée. (Agricultural aspects of development of an integrated regional plan.) (Région de Ouagadougou.) (Paris, SEDES, 1965) 3 vols.

Vol.1 (133 pp) Analysis of the present situation. Vol.2 (314 pp) Prospects for its improvement. Vol.3 (57 pp) Summary. Integrated rural development plan for a region suffering from the effects of drought and emigration.

DESCHAMPS L
UPV 202
Notes sociologiques pour un programme de développement dans la grande région de Ouagadougou. (Sociological notes for a development plan in the greater Ouagadougou region) 29 pp.

202A
Etude sociologique pour un programme de développement de la zone d'action intégrée de Ouagadougou. (Sociological study for a development plan for the Ouagadougou integrated operation zone.) 98 pp. (Paris, SATEC, 1964/République de Haute-Volta, Ministère de l'Economie Nationale, Direction des Services Agricoles.

(i) Preliminary outline report, and (ii) study in depth of the social and psychological implications of local development programmes, with recommendations for future action on the basis of experience gained.

REPUBLIQUE DE HAUTE VOLTA, MINISTERE DE L'ECONOMIE NATIONALE, DIRECTION DES SERVICES AGRICOLES
UPV 203
Programme de développement rural en pays Mossi: 2e Phase (1965-1967). (Rural development programme in the Mossi country: phase 2 (1965-1967.) (Paris, SATEC, 1964).

Vol.I (40 pp) Summary; Vol.II (52 pp) Technical Report (recapitulation and outlook); Vol.III (24 pp) Trends in agricultural income. Report on the progress of the development programme described in UPV 1101.

CARBON H
UPV 204
Périmètre de restauration des sols de Ouahigouya. Projet d'aménagement et de mise en valeur agricole. (The Ouahigouya land reclamation area: agricultural development plan.) (Paris, CERES/Volta (CTFT-BDPA), 1965)

Vol.I (60 pp) Description of the area; Vol.II (101 pp) Outline development plan; Vol.III (51 pp) Financing and justification; Vol.IV (85 pp) Reports of surveys, Part I. (General statistics, demography, flora); Vol.V (61 pp) Reports of surveys, Part II (use of time in Mossi land, Yabonsgo village study, stock-raising); Vol.VI (38 pp) Reports of surveys, Part III (trade, anti-erosion measures, market-gardening); Vol.VII (18 pp) Reports of surveys, Part IV (miscellaneous); Vol.VIII Maps. Comprehensive analysis of resources and development plan of an area suffering seriously from erosion and emigration.

ANON
UPV 205
Rapport détaillé sur les résultats obtenus en cours de la première phase de l'opération de mise en valeur agricole du Yatenga au cours de la période du 8.9.65. au 1.1.67, et

propositions d'intervention pendant la deuxième phase. (Detailed report on results of Phase 1 of the Yatenga agricultural development plan between 8.9.65. and 1.1.67., and proposals for action to be undertaken during Phase 2.) (Paris, BDPA, 1967) 90 pp.

Progress report of the development plan, being financed by the European Development Fund, which arose out of the CARBON report (see UPV 204).

ANON
UPV 206 Etude pour un programme de développement rural dans le Sud-Ouest de la République de Haute-Volta. (Proposed rural development plan in the South-West of the Upper Volta Republic.) (Ougadougou, SATEC, 1963) 184 pp.

Inventory of resources, achievements to date, and proposed priority areas. The report lays particular stress on extension services and 'animation rurale'. See also UPV 1101-1103.

3. LAND TENURE

BOUTILLIER J L
UPV 301 Les structures foncières en Haute-Volta. (The structure of land-holding in Upper Volta.) ("Etudes voltaïques", Ouagadougou, 1964, No.5, pp 5-183.)

A description of land tenure systems.

SAVONNET G
UPV 302 Les régimes fonciers des populations du Sud-Ouest de la Haute-Volta. (Systems of land tenure among the populations of the south-west of Upper Volta.) (Ouagadougou, IFAN, 1962) 43 pp.

A description of basic principles of land tenure, and of regional variants.

4. CO-OPERATIVE FORMS OF ENTERPRISE

DULSER E
UPV 401 Rapport au gouvernement de la République de la Haute-Volta sur le développement du mouvement coopératif. Réseau coopératif d'approvisionnement dans le secteur agricole. (Report to the Upper Volta government on the development of the co-operative movement and of a co-operative supply network in the agricultural sector.) (Geneva, ILO, 1964) 32 pp.

Description of present structure of, and government influence over, agricultural and other co-operatives. Recommendations on future organisations at national and local level, financing, and training in accountancy and management.

6. LIVESTOCK PRODUCTION

LACROUTS M & TYC J
UPV 601 Notes sur l'élevage et l'exploitation de ses produits dans le cadre du plan voltaïque de développement. (Notes on livestock-raising and marketing of livestock products within the framework of the Volta development plan.) (Paris, SEDES, 1962) 51 pp.

Production and marketing of livestock; recommendations for their improvement. Technical advice on the management of the abattoir and refrigeration plant at Bobo-Diaoulasso producing largely for export.

MORDANT J & LEBRUN J P
UPV 602
Le potentiel zootechnique de la Haute-Volta. (The livestock potential of Upper Volta.) (Paris, SEAE, 1969) 237 pp.

A descriptive analysis of the present livestock population (including pigs and poultry), and its geographical distribution, with special reference to the development of animal traction. Technical possibilities for its further extension, as well as for the increased output of beef, are examined.

KMOCH H G
UPV 603
L'amélioration des pâturages et de la production fourragère. (Improving pasture land and forage production.) Report No.1 (Rome, FAO, 1964) EPTA Report 1873, 40 pp.

KEULEMANS N C
UPV 604
Report No.2 (Rome, FAO, 1965) EPTA Report 2085, 25 pp.

The first of these two reports deals with research into the effects of grazing (especially over-grazing), setting up extension services, and mapping and classifying the country's pasture lands. The second makes recommendations for setting up a countrywide service to co-ordinate research and action on grassland improvement, range management, the extension of mixed farming, and the creation of large-scale ranches.

TALL R
UPV 605
Contribution à l'étude du lait et du lait caillé en Haute-Volta. (Contribution to the study of milk and curds in the Upper Volta.) (Thèse de l'Ecole Nationale Vétérinaire d'Alfort, Paris, 1966, No.63) 79 pp (thesis).

An analysis of problems of production and consumption and suggested solutions. (WAERSA 1922/1967.)

ROBINET A H
UPV 606
Rapport de mission sur le développement de l'élevage et de la production animale. (Report of a mission on the development of livestock-raising and meat production.) (Paris, SEAE, 1967/République de Haute-Volta) 100 pp (P).

Statistics are given of production, marketing (including exports to neighbouring countries), slaughtering, processing, and consumption of livestock. A critical appraisal is made of the developments to date of animal traction, mixed farming, and cattle and poultry breeding. The organisation of the livestock processing industry is discussed. Annual investment in the livestock sector from 1959 to 1966 is detailed, as well as that planned for 1967-70, and for the decade 1971-1980. Recommendations are made on administrative, technical, and veterinary problems and on future investment. No ranching should be undertaken without extensive preliminary research into both its technical and economic aspects.

SHENKAR Y
UPV 607
Développement de l'aviculture. (The development of poultry production.) (Rome, FAO, 1965) EPTA Report 2172, 11 pp.

Recent developments in modern methods of egg and poultry-meat production in the public and private sectors are described. Short-term recommendations include stepping up production of lower cost compound feed and day-old chicks, extending small-scale poultry-keeping in the bush, and improving veterinary services. In the longer term, day-olds of table breeds should be produced, and courses started in poultry husbandry.

7. CROP PRODUCTION

GERARDIN B
UPV 701
La culture attelée dans le périmètre de Ouahigouya. Enquête sept.-déc. 1964. (Animal traction in the Ouahigouya 'périmètre'.) (Paris, BDPA, 1966).

Report contained in Vol.VII of CARBON study (see UPV 204).

ANON
UPV 702

Essai de culture attelée. Ferme communautaire expérimentale IRHO de Kamouna (cercle de Banfora). (Animal traction trials at the IRHO experimental farm at Kamouna.) (Ninangoloko, IRHO, 1964) 8 pp.

Technical aspects, first results, and estimated marginal returns.

DEFRAIGNE J P
UPV 703

Expérience de culture modernisée en Haute-Volta: ferme communautaire de Haute-Volta. (An experiment in modernised cultivation in Upper Volta: the Upper Volta communal farm.) ("Oléagineux", Paris, 1967, No.5, pp 301-306.)

An economic analysis of costs and returns. Incomes of the participant young farmers are five times those of farmers using traditional methods.

CONSEIL DES ETATS DE L'ENTENTE
UPV 704

La production et la transformation des tomates en Haute-Volta. (Production and processing of tomatoes in Upper Volta.) (Abidjan, 1968) 25 pp.

Assessment of a project to develop tomato production linked to a concentrate plant to the west of Bobo-Diaoulasso. Its produce would be marketed in the Entente states and in West Africa generally.

8. IRRIGATION

MOREAU L
UPV 801

Réalisation de barrages en investissement travail: Haute-Volta. Rapport de travaux. (Labour investment in dam construction in Upper Volta. Working Report.) (Paris, BDPA/SEAE, 1967) 42 pp.

DAVID M
UPV 802

Etude des coûts de construction des barrages de Soula et de Nagreongo, Haute-Volta. Etude complémentaire. (Construction costs of the Soula and Nagreongo dams, Upper Volta: a further examination.) (*ibid*., 1967) 18 pp.

The two studies comprise a technical and economic analysis of a labour-intensive investment project.

9. MARKETING/CONSUMPTION

MANLHIOT B
UPV 901

Note relative à la mise en place de réseaux commerciaux ruraux en Haute-Volta. (Note on setting up marketing networks in rural areas in Upper Volta.) (Paris, SEDES, undated) 68 pp.

Recommendations for improving present distributive organisations (state trading, para-statal, or co-operative), such as they are, with the minimum financial outlay; for encouraging the private sector; and for intensifying agricultural extension work in order to bring about a substantial increase of marketable surpluses.

MANLHIOT B & AUBERT C
UPV 902

Flux commerciaux intérieurs dans la grande région de Ouagadougou. (Internal marketing channels in the greater Ouagadougou region.) (Paris, SEDES, 1964) 2 vols.

Vol.1 (236 pp) Economic assessment. Vol.2 (34 pp) Summary. A comprehensive market study of the region surrounding the capital of Upper Volta, with a relatively high density of rural population (25 per sq. km. compared with 16 for the whole country) and unfavourable natural conditions.

ANON Compte-rendu sur les activités de commercialisation du
UPV 903 BDPA dans le Yatenga au cours de la campagne 1966-1967. (Report on the BDPA's marketing activities in Yatenga for the year 1966-1967.) (Paris, BDPA, 1967) 30 pp. Also Rapport détaillé (detailed report) 90 pp.

Results achieved and lessons learnt from the organisation of local marketing by the BDPA: a temporary experiment pending the establishment of an organisation to be controlled directly by the local population.

DURAND C L Commercialisation du bétail en Haute-Volta. (Livestock
UPV 904 marketing in Upper Volta.) (Paris, SEDES, 1961) 3 vols.

Vol.I (Reports 1 to 6) (252 pp) Analysis of current data. Available information on cattle and sheep numbers, market structure, prices, and margins is presented and evaluated. There is a separate report on the Ghana market and its potential as an outlet for supplies of livestock and meat. Vol.II (Reports 7 & 8) (98 pp) Means of improving production and distribution at different market stages. Report 7 considers the production and marketing process. Report 8 examines the investment, management, and amortisation costs of setting up a refrigerated abattoir, a canning plant and a cattle ranch. Vol.III (40 pp) Summary report of situation and recommendations.

LACROUTS M & TYC J Notes sur l'élevage et l'exploitation de ses
UPV 905 produits dans le cadre du plan voltaïque de développement. (Notes on livestock-raising and marketing of livestock products within the framework of the Volta development plan.) (Paris, SEDES, 1962) 51 pp.

For summary see UPV 601

PIQUARD P Quelques données concernant la commercialisation du bétail
UPV 906 au Yatanga. (Information on cattle marketing in Yatenga.) (Ouahigouya, BDPA, 1966) 6 pp.

Main flows, transport costs, and market prices are examined, and recommendations made for the development of slaughtering and refrigerating facilities, enabling Upper Volta to compete with Niger and Mali on the markets of Ghana and Ivory Coast.

SAAOGH G et al Enquête budget consommation 1963-64. Résultats pro-
UPV 907 visoires. (Interim report of consumption budget survey 1963-64.) (Ouagadougou, République de Haute-Volta, Ministère du Développement et du Tourisme, 1964) 104 pp.

A random sample survey of household budgets in Ouagadougou (60,000 inhabitants), Bobo-Diaoulasso (50,000), and a stratified sample in two rural areas in the Eastern (2.159 mn. inhabitants) and Western (690,000) regions. 840 urban budgets and 1,640 rural ones were surveyed in rotation over a period of 12 months for a period of 30 consecutive days in the towns and 28 in the rural areas. The following aspects are analysed: demographic structure; distribution of households by monthly expenditure according to zone and region; effects on consumption of household size, tribe, occupation of head of household, and season of observation; structure of income and of expenditure on food, clothing, housing, and intermediate goods; degree of balance of budgets; and eating habits.

10. PROCESSING INDUSTRIES

ANON Projet technique et financier pour l'industrialisation de
UPV 1001 produits agricoles (séchage de viandes bovines; conserve de sauces et de plats africains). (Technical and financial

proposals for the industrial processing of agricultural products (drying beef; preserving sauces and African dishes).) (Paris, SEDIAC, 1964) 167 pp.

The study includes a detailed analysis of costs of production. Potential demand, market outlets, and retail prices are considered briefly, but were not the object of special research for this study.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

SORDOILLET et al
UPV 1101
Une opération de développment rural en pays Mossi. (Agricultural development project in the Mossi country.) (Paris, SATEC,1964/"L'Agronomie Tropicale", Paris, 1964, No.7, pp 579-597.)

First report on an agricultural development project.

BONNEFOND P
UPV 1102
Problèmes de rentabilité d'une action de développement agricole. L'opération SATEC en pays Mossi. Aspects micro-économiques. (Problems of profitability in an agricultural development project. Micro-economic aspects of the SATEC operation in Mossi land.) (Paris, ORSTOM, 1967) 156 pp.

The SATEC method of approach to development and extension is described, with particular reference to adoption of animal traction and fertiliser application. Typical farm budgets for 1962 to 1964 are compared with others estimated in the course of a SEDES enquiry for 1963/64. The extent to which increases in net farm income can be ascribed to participation in co-operative schemes of the SATEC type is discussed, as well as the marginal effect on incomes of adopting the animal-drawn hoe, with or without fertilisers.

DE WILDE J C et al
UPV 1103
Experiences with agricultural development in tropical Africa. (Baltimore, IBRD/Johns Hopkins, 1967.)

For the first three years of its operation (1961-64) the SATEC concentrated on raising the subsistence production of the Mossi farmer. Since then it has turned its attention to developing cash crops as well. Through its extension work the SATEC has brought about the formation of co-operative groups of farmers, mainly for purchasing on credit cultivators, donkeys, harnesses and fertilierss. It was not possible, at the time of writing, to conclude that these had yet brought about either a marked increase in output or rise in incomes. Probably too much stress was laid on expanding the number of co-operatives and of members rather than ensuring that the co-operatives which were established really took root and developed initiative. Apart from the basic poverty of the agricultural resources of the Ouagadougou region, the central difficulty has been the lack of effective prior research on a 'package of agricultural improvements' which was both technically feasible and economically attractive to the farmer. Extension agents have had practically no agricultural training, and the technical assistants too little knowledge of the economic and social problems of the region.

12. RURAL/URBAN RELATIONS

DENIEL R
UPV 1201
De la savanne à la ville. Essai sur la migration des Mossi vers Abidjan et sa région. (From savanna to city. Study of the migration of the Mossi people to Abidjan and its environs.) (Aix-en-Provence, CASHA, 1967) 187 pp.

Results, mainly demographic and sociological, of an enquiry into rural migration from Upper Volta to the Ivory Coast.

GISSOU H
UPV 1202
Le rôle des agglomérations urbaines dans les états du Tiers-Monde. (The role of urban growth in developing countries.) Report presented on behalf of the government of Upper Volta; Working paper No.35 for the 34th study session of INCIDI, Aix-en-Provence, September 1967. 12 pp (P).

Under 5 per cent of the population of Upper Volta live in towns, which are the only significant source of wage incomes. Sorghum is still the staple item of diet, combined with roots and pulses, but there is an increasing demand for fruit, livestock products and, especially, rice. The close contact maintained between the population of the towns and that of the local countryside has resulted in rice, fruit, and vegetables being supplied largely from nearby holdings, often under the control of the more prosperous town-dwellers, who employ wage labour to work them. Thus, especially in the north and centre of Upper Volta in poorly-endowed Mossi country, a gradual proletarianisation of the immediate countryside is occurring. Urban growth brings little economic benefit to more distant areas.

VIAL J
UPV 1203
L'implantation d'artisanats industriels du tissage en Afrique. (Cameroun, Haute-Volta, Niger et Tchad). (Setting up artisanal weaving industries in Africa (Cameroon, Upper Volta, Niger, and Chad.) (Paris, SEDIAC, 1964) 127 pp.

The present economically unsatisfactory situation of 'cottage industries' in all four countries is reviewed. Recommendations, relating to Niger but applicable *mutatis mutandis* in the other countries, include the concentration of supply and improvement of marketing in order to reduce present high unit costs, and improve training skills. The proposed developments would contribute to import-saving, strengthening of rural communities, and to economic growth in general.

13. STATISTICAL SERVICES

KAMOUN A
UPV 1301
Le développement des statistiques agricoles: rapport au gouvernement. (Report to the government on the development of agricultural statistics.) (Rome, FAO, 1967) UNDP Report TA 2279, 23 pp.

Recommendations for operation of a statistical service, training of personnel, and a survey of cultivated land and its productivity. (FAO 00158/1967.)

ZAMBIA 1

1. NATIONAL PLANNING - SITUATION AND OUTLOOK

REPUBLIC OF ZAMBIA
ZAM 101
First National Development Plan, 1966-1970. (Lusaka, Office of National Development and Planning, 1966) 288 pp (P).

Agriculture and Land are given separate chapters in the Regional Programmes as well as in the main part of the Plan (pp 21-30). After a general assessment of the place of agriculture in the country's development, the following aspects are considered individually: crop and livestock production; economic infrastructure (access roads); resettlement in tse-tse freed areas; water supplies and irrigation; credit; direct grant investment; tractor mechanisation; development of small enterprises; extension work and training; and marketing.

ANON
ZAM 102
Zambia and the East African Common Market. (London, The Economist Intelligence Unit, 1968/Republic of Zambia.) 2 vols. 316 pp and 246 pp.

For summary see AFR 206.

SEERS D (leader) et al
ZAM 103
Report of the UN/ECA/FAO Economic Survey Mission on the economic development of Zambia. (Ndola, Falcon Press, 1964) 176 pp and Appendices (pp I-CXLII) (P).

Chapter IV (pp 53-74) analyses the current agricultural situation and makes supply and demand projections for agricultural products to 1965 and 1970. The main obstacles to development are listed, and guide-lines put forward for a plan. Measures required for reorganising crop husbandry, including mechanisation, and cattle husbandry, including regulation of grazing are examined. A number of institutional changes are discussed, in the systems of land tenure, marketing, credit, education and training. On the production side a number of possibilities are explored: raising yields; reorganising village agriculture; setting up tractor pools and cattle-ranching units; and promoting large-scale African farming, vegetable and poultry production, and plantation crops, and a partnership of European and African farming interests. Chapter V (pp 75-90) Manufacturing, includes a brief assessment of the situation and outlook for the food and beverages industry, as well as for textiles and footwear. Of the sixteen most urgent tasks selected by the Mission at the close of their report from among the large number of recommendations made, only two refer directly to agriculture: the obtaining from overseas agencies of 'large numbers' of agriculturalists, and the construction of a fertiliser plant. Appendix J, the Statistical Needs, includes a section on the collection of rural and agricultural statistics.

GARDNER T C (Chairman) et al
ZAM 104
Report of the rural economic development working party. (Lusaka, Government Printer, 1961) 173 pp (P).

The working party, which reported in November 1960 proposes, in the course of a comprehensive review of the state of agriculture and of its ancillary industries and services, urgent measures for developing the agricultural sector, especially for raising output. Even making a 'very pessimistic' assessment of what could be achieved, and allowing for the African farmer's natural conservatism, the report concluded that the practical limits of what could be accomplished, expressed in money terms, lay in the £20-£33 mn. bracket. This was not related to finance immediately in sight. But any cutting out of apparent 'inessentials' such as rural housing and education would merely lessen the plan's chance of success. 'If we had cut our coat according to the cloth at present available we could not have made adequate proposals in regard to the rural development programme at all.' The working party's 116 different recommendations are tabulated in an Annexure.

MAKINGS S M
ZAM 105
Agricultural change in Northern Rhodesia/Zambia, 1945-1965. ("Food Research Institute Studies", Stanford University, Calif., 1966, No.2, pp 195-247.)

A descriptive analysis of development policy and planning between the end of World War I and the achievements of Zambian independence. Changes in approach to the problems of African agriculture are exemplified, first, by the 1945-1965 Ten-Year Development Plan, whose dominant theme was socio-economic; then by the 1960 report of the Rural Economic Development Working Party, which set targets for a massive expansion of output by concentrating on the most productive land and farmers - an agro-economic exercise; and, finally, by the ECA/FAO Survey Mission's report of 1964, whose outlook 'might fairly be labelled as politico-economic'. The advantages and shortcomings of each are discussed at some length. The author concludes that 'if the major aim of agricultural development is the advancement of the rural people in their use and occupation of the land, then the socio-economic approach of the ten-year plan was more soundly based than that of either the two later programs'.

HELLEN J A
ZAM 106
Rural economic development in Zambia, 1890-1964. (Munich, Weltforum Verlag, 1968/Ifo-Institut für Wirtschaftsforschung) Afrika-Studien No.32, 297 pp.

A description of the physical and cultural factors involved in the colonial experience in rural tribal areas is followed by an analysis of patterns of economic development in each region.

HESELTINE N
ZAM 107
Administrative structures and the implementation of development plans. ("Journal of Administration Overseas", London, 1967, No.2, pp 75-84.)

A comparison between local administration or rural development plans in Madagascar and Zambia. (Tropical Abstracts q1478/1967.)

2. REGIONAL STUDIES

KAY G
ZAM 201
Changing patterns of settlement and land use in the Eastern Province of Northern Rhodesia. (Hull University Publications, 1965.) Occasional Papers in Geography, No.2, 108 pp.

The evolution of African commercial farming since the 'thirties, before which time African interests had been almost entirely neglected, is described up to the eve of independence in 1963. Gross farm income rose substantially between 1955 and 1963, by more than 250 per cent, though it still represented only 30 shillings per head of the population of the area in the latter year. Income was mainly from cash crops, principally groundnuts. Development of livestock husbandry requires large investments in technical improvements as well as a change of attitude by Africans to cattle. The main problem for the future is of efficiently deploying resources of men and money when capital and trained staff are scarce. (WAERSA 1049/1966.)

6. LIVESTOCK PRODUCTION

HORWOOD O P F (Chairman) et al Report of the Commission of Enquiry into
ZAM 601
the beef cattle industry in Northern and Southern Rhodesia. (Salisbury, 1963) 163 pp (P).

For summary see RHO 601

9. MARKETING/CONSUMPTION

DONKIN J
ZAM 901
Marketing organisation of Zambia. ("Monthly Economic Bulletin of the Ministry of Agriculture", Lusaka, August 1967, pp 34-39.)

The country's four types of marketing organisations are: (a) statutory boards, (b) co-operative societies, (c) private enterprise, and (d) government schemes. The functions of the statutory boards are: marketing grain, dairy products and other agricultural produce, and cold storage. A National Marketing Board is proposed which will incorporate the Grain Marketing and Agricultural Rural Marketing Boards. (WAERSA 265/1968.)

ANON
ZAM 902
The tobacco industry in Zambia. (Lusaka, Inbucon Limited, 1967/Tobacco Industry Board) 60 pp.

Different methods of conducting tobacco auctions are investigated and recommendations made on transition to a mechinised system. In the light of a study of tobacco marketing methods in Zambia, it was concluded that a change from auctions to some other form of marketing would be economically unsound.

ROTBERG R I
ZAM 903
Rural Rhodesian markets. (In "Markets in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 581-600.)

A descriptive analysis of commodities, prices, and vendors in markets in Northern Rhodesia.

MIRACLE M M
ZAM 904
African markets and trade in the copperbelt. (In "Markets in Africa", ed. BOHANAN P & DALTON G, Northwestern University Press, Evanston, Ill., 1962, pp 698-738.)

Organisation of trade, supply channels and zones, and commodities marketed, are described (1959).

10. PROCESSING INDUSTRIES

PRICE W
ZAM 1001
The hides, skins and leather industries in Zambia. (Rome, FAO, 1965) EPTA Report 1971, 23 pp.

Recommendations on collection and a central tannery.

11. EXTENSION SERVICES AND COMMUNITY DEVELOPMENT

OKADA F E & WITOLA J P
ZAM 1101
The Rufunsa area: socio-economic survey for village re-grouping. (Lusaka, Department of Community Development, Minister of Co-operatives, Youth, and Social Development, 1968) 63 pp.

12. RURAL/URBAN RELATIONS

HEISLER H
ZAM 1201
The enclave society and nation-building in Zambia. Working paper No.10 for the 34th study session of INCIDI, Aix-en-Provence, September 1967, 24 pp (P).

The dualistic structure of the economy in Zambia is modified to the extent that there has been a notable expansion in cash cropping among the many tribes whose organisation is not overwhelmingly hierarchical and which have therefore been open to innovations and the raising of new elites. Their farms, concentrated within a 20-mile wide strip along the North-South spinal railway, are already within the modern sector. Development policy has so far tended to reinforce these developed areas. Most other rural areas, owing to the poverty or non-existence of roads, are isolated, generating little or no demand for local manufactuiing industry, and no longer required to provide labour for mining. Circulatory migration has almost ceased. In 1964, 7 per cent of urban wage-incomes were remitted to the countryside, compared with 35 per cent in 1940. The money economy is dominated by the copperbelt, creating an enclave society, which already in 1963 comprised just under a quarter of the African population, of whom 80 per cent were living in towns (including about 50,000 unemployed males). Rural/urban tensions will be increased by the foreseeable decline in the international demand for copper during the early 'seventies. There are a number of factors tending to create a permanent urban class: (a) apart from high wages, risk of loss of job discourages workers from returning periodically to their villages; (b) the steady acquisition of middle-class status by town-dwellers; (c) the attraction of pensions in the mines since 1959, and now on the railways and in the public services; (d) children are no longer sent to the country for their social education, but rather the reverse as more Africans attend fee-paying schools; (e) some spread of house ownership, though miners have tended to prefer to continue paying subsidised rents than take advantage of the companies' purchase schemes; (f) urban welfare facilities; and (g) loss of any sense of inferiority by Africans in the towns, where miners are now as privileged as were formerly white workers.

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Important Note

1. Studies on a particular subject can often be located by direct reference to the relevant country section and heading of the Reading List (for explanation see Introductory Note, page iii, para.5) without use of this Index. The Index is confined to matter not readily identifiable in this way. Only references to individual countries occurring in the 'Africa General' section are listed, for instance**, and most of the entries in the Index deal with subjects to which references occur under a number of different countries and headings.
2. Entries for individual commodities (e.g., 'cattle', 'coffee', 'citrus') include studies dealing with their processing, marketing and consumption, as well as with production and policy. These can to some extent be identified from their reference numbers, studies on policy beginning with 1, those on production with 6 (livestock) or 7 (crop), those on marketing and consumption with 9, and those on processing with 10. This is only a rough guide. Inevitably a given study may deal with more than one of these aspects.

** Countries (provinces) of Portuguese Africa are also for convenience of reference indexed here separately.

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